

**A FRAMEWORK FOR ORGANIZATIONAL WORKPLACE
RELOCATION: OFFICE BUILDINGS
IN SAUDI ARABIA**

BY

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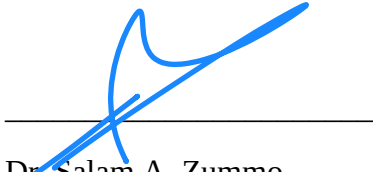
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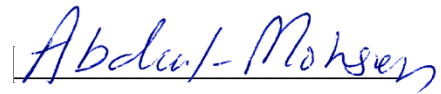
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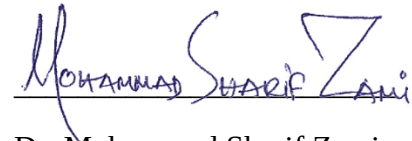
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2020

Dedication

Allah, Increase me in knowledge.

For **Father** & **Mother** who helped me in all things great and small, they are pulse of life.

For my beloved **Sister**; the angel of happiness. |

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In the Name of Allah, the Most Beneficent, the Most Merciful.

“All the praises and thanks be to Allah, the Lord of the 'Alamin. The Most Beneficent, the Most Merciful. The Only Owner of the Day of Recompense, You (Alone) we worship, and You (Alone) we ask for help. Guide us to the Straight Way... The Way of those on whom You have bestowed Your Grace, not (the way) of those who earned Your Anger, nor of those who went astray.” (The Qur'an- Surah Al-Fatihah)

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LIST OF ABBREVIATIONS

OPO	:	Open Plan Office
ABW	:	Activity Based Workplace
MEP	:	Mechanical, Electrical and Plumbing
IT	:	Information Technology
PBO	:	Purpose Built Offices
GIS	:	Geographic Information System
ASTM	:	American Society for Testing and Materials
GCC	:	Gulf Cooperation Council
QA	:	Quality Assurance
CAFM	:	Computer Aided Facility Management Software
WHS	:	Work Health and Safety Plan
O&M	:	Operation and Maintenance
BOSSA	:	Building Occupants Survey System Australia
IEQ	:	Indoor Environmental Quality
PM	:	Project Manager
VOIP	:	Voice Over Internet Protocol
BMS	:	Building Management System
FHC	:	Fire Hose Cabinet

ABSTRACT

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Organizational workplace relocation can be a hectic process. It requires a lot of organized efforts and planning to be successfully implemented without disrupting organizational service; critical due to its complex demands for coordination between several stakeholders, especially in large organizations.

The relocation process takes place over three phases during its life cycle, namely the pre-location phase, relocation phase and post-relocation phase. Each phase has different set of influential factors (a total of thirty-four) that were identified through the review of related literature and assessed by (a total of sixty-four) high profile professionals in Saudi Arabia. Knowledge of these factors have the potential to influence the effectiveness of the relocation process in terms of time, cost and organizational individuals satisfaction.

Published literature indicated the lack of studies on frameworks, which tackle the process of organizational workplace relocation holistically. Thus, the developed framework is proposed taking into consideration the activities conducted during each of the phases, so that organizational facility managers and real estate professionals can use it as a guide, for the planning and implementation of the workplace relocation process. The framework is validated in this study as a standard methodology - from realizing the need to relocate, through its full implementation, toward a satisfactory occupation - by (twelve) high profile professionals; who were in consensus on the applicability and wide coverage of the framework on the framework.

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ملخص الرسالة

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التخصص: ماجستير الهندسة المعمارية

تاريخ الدرجة العلمية: يناير ، 2020

من الممكن أن تكون عملية انتقال المنظمات إلى مرافق عمل جديدة محمومة بالتحديات التي تتطلب الكثير من الجهود المنظمة والتخطيط المسبق لعملية تجهيزها و الانتقال إليها بنجاح و بدون تعطيل في الأعمال التي تقدمها و تقوم بها المنظومة، و قد تكون هذه العملية حاسمة بسبب تعقيدات متطلباتها للتنسيق بين العديد من الأطراف المعنية ذات المصالح المختلفة خاصة في المنظمات الكبيرة منها.

تتم عملية النقل على ثلاث مراحل خلال دورة حياتها ، وهي مرحلة ما قبل النقل (وتشمل عمليات اتخاذ القرار و تقييم الأصول الحالية والتخطيط للنقل و تصميم مكان العمل الجديد) و مرحلة النقل (و تشمل اختيار المنفذين و مقدمو الخدمة و عمليات تحصيل الموارد اللازمة و تجهيز مكان العمل الجديد و النقل الفعلي و التأكد من مطابقتها للتخطيط المرصود و المسبق لها) و مرحلة ما بعد النقل (و تشمل عمليات التشغيل و مخططات السلامة و الصحة الخاصة بمكان العمل و تقييم الموظفين للمنشأة الجديدة والرصد الخاص بهم). كل مرحلة لها مجموعة مختلفة من العوامل المؤثرة فيها (ما مجموعه أربعة وثلاثون عاملاً) تم تحديدها من خلال المراجعة الأدبية للمصادر المتخصصة وتقييمها من قبل (ما مجموعه أربعة وستون) من المهنيين البارزين في المملكة العربية السعودية. إن معرفة هذه العوامل يمكن من التأثير بإيجابية على فعالية و كفاءة عملية النقل من حيث الوقت والتكلفة ورضا الأفراد المعنيين بالمنظومات.

أشارت الأدبيات المنشورة إلى عدم وجود دراسات حول الأطر التي عالجتها عملية انتقال مكان العمل التنظيمي. وبناء عليه فإنه تم تطوير إطار عمل يراعي الأنشطة التي يتم إجراؤها خلال كل مرحلة من المراحل السابق ذكرها بحيث تمكن مديري المنشآت التنظيمية والمهنيين العقاريين من استخدامها كدليل لتخطيط وتنفيذ عملية انتقال مكان العمل للمنظمات. و حتى يتم التحقق من صحة الإطار كمنهجية قياسية - من إدراك الحاجة إلى الانتقال و خلال تنفيذ الانتقال بشكل كامل و حتى التشغيل و التسكين المكمل بالرضا - تم التأكد من قابليته للتطبيق عن طريق إجراء مقابلات شخصية مع (ما مجموعه اثنا عشر) مهنيين بارزين و الذين قد أفادوا بالإجماع على أهمية و موافاة الإطار في تغطية الجوانب المختلفة لتنفيذ و تطبيق عملية انتقال أماكن منظومات العمل.

درجة الماجستير في علم الهندسة المعمارية
جامعة الملك فهد للبترول والمعادن
الظهران، المملكة العربية السعودية

CHAPTER 1

INTRODUCTION

In the last decades new products, processes and services have emerged at an increasing rate. Organizational focus on local markets turned out to be global due to advances of technology, uncover of organizational markets protection, resulting in an escalated competition and an enhanced access opportunity. To keep abreast of competition organizations are restructuring, introducing new products and services, changing information systems and introducing new work practices.

Governmental visions for new smart cities, investments in business districts where private sector and foreign businesses are generating opportunities of investments in corporate real estate. An adaptive motion of change action concerning contemporary workplace facilities has come to be an essential approach associated to the previously mentioned challenges. Thus, Organizations that fail to change will fail in competition.

Therefore, understanding the organizational workplace relocation has become a challenging requirement by being a considerable choice throughout change for organizational progression.

1.1 BACKGROUND

Organizational workplace relocation is not a simple activity. Regardless of its distance, it involves several stakeholders, phases and decisions and usually described as unsystematic and complex.

The relocation is a form of organizational change. While change is a broad word that changes even its own meaning with different contexts (Finch, 2011). Workplace relocation is an opportunity to introduce elements of organizational change. The simplest definition of organizational change by relocation is the difference between new and old setting of the organization. A relocation decision can be conducted serving different scenarios & various formats; whether lease of new spaces or simply designing a newly planned space or a holistic construction of a new workplace at a new location, resulting acquisition of a different work strategies and more dynamic office layouts that inhabit new styles of work (Stan Aronoff, 1995; Rothe, Sarasoja, & Heywood, 2015).

In general, economic climate is the major driver for workplace relocation; as in response to challenging economies, organizational strategies can lead to identifying a need of change in workplace facilities. Unfavorably, with a forced sense of urgency to start relocating. The organizational change happens in ways where the firm unfreezes its behaviors and patterns to move them to a desired state where it refreezes them to implement the change (Bull & Brown, 2012).

Recently in the Middle East, organizations are experiencing incessant change demands; the need to perform more and better services, at lower costs, at a higher quality,

and greater efficiency (Booz and Company; pwc, 2016). Thus, investigating organizational physical resources (in respect of its ability to sustain works output and advance change by workplace relocation) in relation to future and current needs, at an appropriate early stage (by fit personnel), would confidently advance a truly effective relocation decision, toward organizational success (Finch, 2011).

Organizational workplaces represent a considerable value, being fixed assets for organizations; the primary purpose of a workplace is to facilitate the provision of a place for conducting work activities within a work environment which supports information sharing and knowledge processing functions (Hassanain, 2010a). In response, external and internal adaptation of organizational change is reliant on its culture, which allows it to validate, undertake and manage workplace changes.

The workplace we know today changed vastly, from what we knew and observed in earlier times. Expecting this rate of change to be faster, wider and more complex with the introduction of new, innovative terminologies, technologies and work processes into today's workplace (Finch, 2011). Failed change management initiatives, inevitably, lead to operational inefficiency, lost time and money, lower productivity and morale, and reduced organizational market share (Booz and Company; pwc, 2016). Thus, establishing a new workplace strategy that meets all the previously mentioned challenges requires a deliberate systematic process, a governing framework for the processes of organizational workplace relocation, that ensures a smoother move, a progressive change that serves the acute needs of the organization (Bull & Brown, 2012).

1.2 STATEMENT OF PROBLEM

The primary purpose of an office building is to facilitate the provision of space. As a place, to conduct various work activities within an environment, that supports information processing and knowledge sharing functions. Hence, office buildings were created to satisfy the need to plan, coordinate and administer filing, planning, designing, supervising, analyzing, decision making, communicating and further work functions. Usually the spaces are occupied with users, such as employees (who perform the work tasks) and in many cases to take hospitality functions to external visitors (referred to as customers, clients, business visitors). All supported with accompanied tools, furniture and equipment that serves within (Stan Aronoff, 1995; Hassanain, 2010a). Therefore, for workplace facilities it is crucial to meet organizational recognized needs, to profit from external economic activities and expand social contributions, while engaging a significant amount of resources (Baccarini & Bateup, 2008). Consequently, workplace facilities endure incessant changes; since organizations are trying to adapt with several external requirements, challenges, internal needs and necessities. Growth, downsize, market demographics, business operating models and cycles; all are sort of cause for changes that directly impact an organizational workplace strategy.

Workplace changes are vital, as they affect workplace occupants and indirectly relate to the consistency of organizational work commitments. Where, workplace relocations can be a hectic process that requires a lot of organized efforts and planning to be successfully implemented without disrupting business.

Relocation process can be critical, due to its complex demands for coordination between several stakeholders, especially in large organizations. Over and above, the practice of understanding workplace relocation is mostly limited to corporates need for more space, or a matter of adjusting expenses, underrating the impacts of a mislaid relocation decision. Organizations have the perception that they have the full capability and required knowledge, to find new premises for themselves, to negotiate leases and sometimes extends to design of a new layout. Yet, *“the proactive strategic planning, management of corporate real estate and workplace infrastructure continues to be a challenge for many organizations”* (Allard & Barber, 2003).

Further, making a smooth organizational relocation is a challenging effort; its process must be managed to ensure deliverables. The decision must be founded in a systematic and logical approach, diverging potential bias of opinion, by the organizational decision makers.

The relocation process takes place over three phases during its life cycle, namely the pre-location phase, relocation phase and post-relocation phase. Each phase has different set of factors, that have several impacts on the relocation as a process. Hence, there is a need to identify the factors that affect the relocation process, taking into consideration the activities conducted during each of the phases. Knowledge of these factors have the potential to influence the effectiveness of the relocation process in terms of time, cost and user satisfaction.

Chasing the large development potential concerning corporate workplace relocation related services in Saudi; in line with 2030 vision, to improve environment for

businesses (Vision2030, 2019). Yet, there is a lack of research, on understanding and evaluating the process of organizational workplace relocations in Saudi Arabia.

Therefore, there is a need, to establish a framework for organizational workplace relocation decision in a purely objective manner; a standard methodology realizing the need to move, through its full implementation, so that facilities manager can use it as a systematic guide for deciding, planning and execution of workplace facilities relocation (Nunnington & Haynes, 2011).

1.3 RESEARCH OBJECTIVES

The main objectives of this research are:

1. To identify and asses the factors, that influence the process of organizational workplace (office Buildings) relocation.
2. To develop a framework, for the process of organizational workplace (office buildings) relocation, in Saudi Arabia.
3. To assess the developed frameworks for organizational workplace relocation (office Buildings), from the perspective of facilities and real estate management professionals, in Saudi Arabia.

1.4 SCOPE AND LIMITATIONS

The followings are scope and limitations of this research:

1. The development of the framework for the organizational workplace facilities relocation shall be limited to the obtained knowledge from literature and refined by local perspective of professional practice in Saudi Arabia.
2. The scope of this research covers organizational workplace relocation: office buildings in Saudi Arabia; from the perspective of facilities management and real estate management professionals in Saudi Arabia.
3. The distribution of the questionnaire surveys and interviews shall be limited to professionals working as facilities managers, and real estate management professionals in Saudi Arabia.

1.5 SIGNIFICANCE OF THE STUDY

Workplace relocation involves several complex activities, challenges, requirements and induce impacts on organizational resources, strategy and behavior. Considering these components is a must; to deliver a successful organizational relocation. Restriction of time forces organizations to rush a relocation related subsequent decisions, processes and activities that may later result into major consequences on the (moved to) new workplace premises; misfits, errors and further consequences related to occupant's dissatisfaction, by unconsciously missing critical considerations, that affect the intended relocation objectives. Henceforth, the importance of this research emanates from the fact that:

1. This study has the possibility to improve the awareness toward importance of enhancing the professional practice, of the related workplace relocation services and management.
2. This study will be beneficial, to facilities managers, real estate professionals and organizations, which plan to relocate their workplace facilities; to carry out an effective process, throughout the organizational workplace relocation events.
3. This study will minimize and reduce errors, that may cause interruptions of works due to the urgent nature of organizational (office building) workplace relocations.
4. This study will bring together tactics and strategies of dealing with aspects related to people of the organization during the events of organizational relocation of workplace facilities.
5. The findings of the study would be directly relevant and applicable to organizational relocation of workplace facilities in Saudi Arabia.

1.6 RESEARCH METHODOLOGY

The research plan is to achieve the thesis research objectives, upon six main phases:

***Realizing objective 1:** identify and assess factors affecting organizational workplace relocation (Office Buildings)*

1.6.1 Phase 1 - Investigation of the factors affecting organizational workplace relocation

This phase will investigate the factors affecting Organizational Workplace Relocation (Office Buildings) through:

1.6.1.1. Identifying factors affecting organizational workplace relocation (office buildings) through review of literature

This step will be carried out to investigate published literature on factors affecting organizational workplace relocation (office buildings), by researching terminologies and definitions, used in literature to define and understand the factors affecting organizational workplace relocation and office buildings processes, considerations and decisions.

1.6.1.2. Refining and consolidating the identified factors which comprehend to the current local practice

This step will be carried out to consolidate and refine the factors affecting organizational workplace relocation (office buildings) by interviewing three relocation project managers in view of current and local practice. Then to categorize the factors under organizational workplace relocation (office buildings) lifecycle namely (pre-relocation, relocation and post-relocation).

1.6.1.3. Development of questionnaire survey

Developed questionnaire survey will be administered to group of facilities managers and real estate professionals working in Saudi Arabia. The questionnaires will consist of three sections:

- **Section A:** Respondents demographic info, area of professional expertise and experience.
- **Section B:** Identified factors assessments.
- **Section C:** Open ended section for professionals' further input.

The professionals will be asked to mark their observed level of Importance for each of the identified factors through selecting one of five evaluation terms, namely:

EXTREMELY IMPORTANT	(4 Points)
VERY IMPORTANT	(3 Points)
IMPORTANT	(2 Points)
SLIGHTLY IMPORTANT	(1 Points)
NOT IMPORTANT	(0 Points)

1.6.1.4. Pilot testing of the questionnaire survey

To test the questionnaire using a smaller sample of five facilities managers and five real-estate professionals to the convenience of the survey and the survey sample by checking:

- Adequacy of the questions
- Identification of ambiguities.
- Adding more factors.
- Checking spaces provided for questions.
- Determining and validating the assumed time required for answering

1.6.2 Phase 2 – Assessment of the identified factors affecting organizational workplace relocation (office buildings)

1.6.2.1. Identification of sample size

The identification of the type and size of the professionals will be determined during this stage.

1. Facilities managers sample size:

The professional's respondents will be determined from the list of organizations collected from chambers of commerce and industry, Saudi Arabia. Equations (1.1) and (1.2) will be used to determine the respondents' size respectively:

$$n_o = (p*q)/v^2 \quad \dots\dots\dots (1.1)$$

$$n = n_o / [1 + (n_o/N)] \quad \dots\dots\dots (1.2)$$

Where:

n_o : First estimate of sample size

p : The proportion of the characteristic being measured in the target population.

Q : Completion of p or 1-p.

V : The maximum percentage of standard error allowed (10% for this study).

N : The population size.

n : The sample size.

Note: To maximize the sample, both p and q are each set at 0.5.

2. Real-estate professionals sample size:

The professional's respondents will be determined from a list of real-estate professionals at organizations collected from chamber of commerce and industry in Saudi Arabia. Equations (1.1) and (1.2) will be used to determine respondents' size.

1.6.2.2. Distribution of the tested questionnaire survey

In this step, the pilot-tested questionnaire survey will be distributed to the various survey participants in Saudi Arabia to assess the identified factors.

1.6.2.3. Data analysis

The analysis of the received data from the facilities managers and real-estate managers to the questionnaire survey will be analyzed with the steps below.

1.6.2.3.1. Calculation of the importance index

Using MS-Excel software, the importance index will be calculated to reflect the level of importance of the identified factors. This index will be calculated using the following equation:

$$Importance\ Index\ (I) = \frac{\sum_{i=0}^4 (a_i)(x_i)}{4 \sum_{i=1}^4 (x_i)} * 100\% \dots (1.3)$$

Where:

i = Response category index where i= 0, 1, 2, 3, 4

a_i = Weight given to i response, where i= 0, 1, 2, 3, 4

Where:

x_i = variable expressing the frequency of (i) as illustrated in the following:

x_0 = frequency of “**Extremely Important**” response corresponding to $a_0=4$.

x_1 = frequency of “**Very Important**” response corresponding to $a_1=3$.

x_2 = frequency of “**Important**” response corresponding to $a_2=2$.

x_3 = frequency of “**Somewhat Important**” response corresponding to $a_3=1$.

x_4 = frequency of “**Not Important**” response corresponding to $a_4 = 0$

Where:

The importance index of:

0–<12.5% is categorized as “**Not Important**”

12.5-<37.5% is categorized as “**Somewhat Important**”

37.5-<62.5% is categorized as “**Important**”

62.5-<87.5 is categorized as “**Very Important**”

87.5-<100% is categorized as “**Extremely Important**”

These categorizations reflect the scale of the respondents' answers to the questionnaire.

1.6.2.3.2. Calculation of “Rank-Order Coefficient of Correlation”

The test of agreements between facilities managers and real-estate managers will be calculated using the “*Spearman's rank-order correlation*” formula (1.4):

$$p = \frac{6 \sum D^2}{N (N^2 - 1)} \dots\dots\dots (1.4)$$

Where:

p = is the rank order coefficient of correlation.

$\sum D^2$ = is the sum of the squared differences in ranks of the paired values.

N = is the number of parameters for which the ranking is made.

Then, Realizing Objective 2: Develop a framework for organizational workplace relocation (office buildings)

1.6.3 Phase 3 – Identify activities within each of the three processes (i.e. pre-relocation, relocation and post-relocation) of organizational workplace relocation

This phase entails the development of the framework for the organizational workplace relocation facilities. The development of the framework will be based on all information reviewed from the literature, interviewing practicing professionals and questionnaire. utilizing the achieved objective from phases 1 and 2.

1.6.3.1. Description of the process-functions (activities)

This phase a described activity for each process of the namely (pre-relocation, relocation and post-relocation) will be sorted within.

1.6.3.2. Definition of the interactions between the identified activities (inputs, outputs and constraints)

Definition of the interactions between the identified functions through determining their (inputs, outputs and constraints).

1.6.3.3. Utilization of IDEF₀ process modeling to develop the framework

In this phase the **IDEF₀** process modelling methodology will be utilized to schematically present the proposed framework for organizational workplace relocation (office buildings) in Saudi Arabia.

Then, Realizing Objective 3: Validate the developed framework for organizational workplace relocation (office buildings)

1.6.4 Phase 4 – Validation of the developed framework for organizational workplace relocation (office buildings)

The developed framework will be validated through interviews with ten professionals that have experience managing relocation for their portfolio of workplace facilities in Saudi Arabia. This is to determine how applicable, is the developed framework, to the practice of organizational workplace facilities relocation; through:

1.6.4.1. Develop a validation questionnaire survey

Develop a questionnaire survey used for the validation of the developed framework functions (activities). Listing functions (activities) under the parent processes of the framework against importance scale and by the question of applicability to current local practice.

1.6.4.2. Validation of the framework through distribution of the questionnaire survey

In this step, the questionnaire survey will be distributed to ten survey participants in Saudi Arabia to determine the importance and the practicality of the developed framework and its underlying activities.

1.6.5 Phase 5 – Conclusions and recommendations

Conclusion and recommendation will be made based on research results and future research areas will be specified.

NO.	Research Objective	Phase	Methodology Activities
Objective 1	Identify and assess factors affecting organizational workplace relocation (office buildings)	<i>Phase 1:</i> Investigation of the factors affecting organizational workplace relocation (Office Buildings)	○ Identify factors through literature review ○ Conduct interviews with 3 relocation project managers to understand the current practice of organizational relocation, and consolidate and refine the identified factors ○ Develop a questionnaire survey. ○ Pilot study of the developed survey with 10 (5 facility managers and 5 real estate managers) professionals.
		<i>Phase 2:</i> Assessment of the identified factors affecting organizational workplace relocation (office buildings)	○ Sample size identification ○ Distribution of questionnaire survey ○ Analysis the collected data: ▪ Calculate the RII and determine the rank of each factor ▪ Determine the level of agreement between the survey participants.
Objective 2	Develop a framework for organizational workplace relocation (office buildings)	<i>Phase 3:</i> Identify Activities within each of the three processes (i.e. Pre-Relocation, Relocation and Post relocation) for Organizational Workplace: (Office Buildings)	○ Describe the activities that need to be undertaken within each process. ○ Define the interactions between the identified functions through determining their inputs and outputs. ○ Utilize the IDEF₀ process modeling methodology to schematically present the proposed framework for organizational relocation.
Objective 3	Validate the developed framework for organizational workplace relocation (office buildings)	<i>Phase 4:</i> Validation of the developed framework for Organizational Workplace Relocation (Office Buildings)	○ Develop a questionnaire survey that include the developed activities of the framework. ○ Distribute the developed questionnaire survey to determine the importance and practicality of the developed activities.
		<i>Phase 5:</i> Conclusions and Recommendations for Organizational Workplace Relocation (Office Buildings)	○ Summary and concluding remarks. ○ Recommendations for future research.

Table 1 - Methodology (Objectives, Phases, Activities) of Research

1.7 THESIS ORGANIZATION

The organization of this thesis is sub-divided into the following seven chapters, toward the achievement of the research objectives:

1.7.1. Chapter One: Introduction

Presentation of the general background information on organizational workplace facilities relocation. The problem statement, objectives, scope and limitations, significance of the study, research methodology and thesis organization.

1.7.2. Chapter Two: Literature Review

The literature review on organizational relocation challenges, requirements, objectives, processes, decision making and its impact on the organizational strategy and people. As well as the preliminary identification of factors affecting organizational relocation of workplace facilities from literature.

1.7.3. Chapter Three: Factors Affecting the Organizational workplace

Relocation Process

Presents the factors related to organizational relocation of workplace facilities.

1.7.4. Chapter Four: Assessments of the identified factors

Explained the data analysis and results received from the distributed questionnaire survey among the professionals' respondents in Saudi Arabia.

1.7.5. Chapter Five: Development of the Organizational Relocation

Framework

Presentation of the development of the framework for the process of organizational relocation of workplace facilities.

1.7.6. Chapter Six: Validation of the Developed Framework

Explains the process of validating the developed framework by professional practitioners on the organizational relocation of workplace facilities.

1.7.7. Chapter Seven: Conclusions and Recommendation

The conclusions, summarization of the study and recommendations for future research extents; all are presented within this chapter.

CHAPTER 2 |

LITERATURE REVIEW

The literature review will cover in depth the definitions related to organizational workplace relocations, furtherly it will assert the importance of developing a generic framework that works as a guide for facility managers, architects, corporate real estate professionals, business owners and workplace decision makers to facilitate their move decisions. It is discussing the role of different stakeholders through the organizational workplace relocation lifecycle. Also, the literature review will investigate the availability of related frameworks and organized processes, that can be encountered, to be utilized during relocations of the organizational workplace.

2.1 INTRODUCTION TO ORGANIZATIONAL WORKPLACE

Organizational workplace is a term that defines a place, building, location where it facilitates spaces for conducting work activities within a supportive environment for knowledge, information sharing and processing functions. In fact, office buildings have been acknowledged to fulfill functional work tasks such as needs to plan, coordinate, administer, filing, planning, designing, supervising, analyzing, decision making and communicating several types of individuals & formations. Workplace spaces are formed to accommodate various types of users, such as employees who perform tangible and intangible work tasks. As well as it accommodates hospitality functions to external visitors whom are referred to as customers, clients, business visitors and all are supported with

accompanied tools, furniture, equipment, any other business enabling tools and technologies that serves within (Stan Aronoff, 1995; Hassanain, 2010a).

2.2 ORGANIZATIONAL WORKPLACE RELOCATION

Office buildings represent considerable value as being fixed assets for all organizations (Hassanain, 2010a). Simplest definition of organizational workplace relocation is that it is an organizational change in which it differs from an old setting into a new one. Relocation of workplace could be a move of an entire company headquarters from one area to another or a transfer of a smaller part of the organization out of existing congested workplace spaces (Bowker, 1989). Workplace relocations are considered to be a distinctive organizational change and an opportunity to introduce new or varying work elements of change to the organization but critical to the levelness of its implementation (Rothe, Christersson, & Heywood, 2014). Corporate relocations are significant due to their comprehensive impacts of change by concerning and affecting employees, business needs, furthermore network of business in general such as clients and its responsibility to society (Krausz, Bizman , & Fox, 2002).

2.2.1. DRIVERS OF ORGANIZATIONAL WORKPLACE RELOCATION

Workplace relocations take place to serve organizational objectives, significantly once in a long span of time for large organizations. It is an action toward acquiring new premises, improvising corporate accessibility in emerging markets and businesses. Needs for centralization and decentralization over various geolocations is a driving factor for the organizational decision makers as it encourages them to rethink the organizational facilities

and real estate integrity for business strategy. For example, creation of single European market in 1993 accelerated demand for organizational mobility where in result relocation rates have increased excessively. Furthermore, Japanese firms have been busy establishing manufacturing headquarters & facilities in Europe, American firms were in competition to expand within Europe and Middle East. It is a fact for several authors in literature that corporate relocations have become an attractive option for the industrial world. The need of expansion and lack of affordable space are both drivers for corporates relocation (Altman, 1991).

In literature organizational relocation decision is perceived as an interpretation, act of selecting newer locations, facilities and sites rather than exploring its potential to develop and improve newer business processes and services . Sarasoja *et al.* (2015) stated that “*All previous literature studies address relocation as a location decision*” while occupiers’ perspective of relocation differ, as it is a management decision, of a process to move, from one location to another, depending on organizational effort to achieve business needs, accompanied with diverse levels of sophistication, several risks and impacts. Previous works have addressed organizational workplace relocation as an unsystematic and complex process which involves several factors, stakeholders, actors, phases and decisions.

For public-sector organizations, workplace relocation have become a modern solution, into a total overhaul urban regeneration; an example of that is the new Egyptian capital, where a massive governmental relocation is planned in a tactic to tackle urban congestion, solve problems in greater old capital city of Cairo and to start new basis for a modern and futuristic governmental services, enabling the use of modern technology and futuristic concepts. Beginning in 2020, The Egyptian government is planned to relocate 51,000 state

administration employees from 31 ministries and sectors to the New Administrative Capital. The government sector will include 36 buildings. One will be for the parliament, one for the cabinet and 34 buildings for ministries (Al Masry Al Youm, 2019). It is aimed to be serving the development of organizational processes completely shifting into a newly constructed environment and facilities. where spaces serve functionality, while impacting the community on various positive levels. It is a decision that will enable the opportunity of practicing activities, that were difficult to change within old governmental facilities and premises. Similar examples from history on the change by relocation of a complete governmental relocations can be found in Pakistan, Brazil, Russia, Myanmar, Nigeria Kazakhstan, Tanzania and Ivory Coast through the history (Eight countries that moved their capitals, 2015).

International firms are racing to relocate, to countries, where opportunities of newer businesses and improved market openness are promised. For the Saudi market, the construction of a central business district named after the custodian of the holy mosques King Abdullah bin Abdul-Aziz has been a tremendous decision into a sustainable future of the kingdom. It is an opportunity for international and local organizations to shift their workplaces into a financial edifice that will definitely result a change on every business aspect.

In Saudi Arabia, city of future named NEOM is planned to be on the red sea being an admired attractive & distinguished destination of opportunities for firms willing to have an improved proximity to international & MENA region markets, advanced access to a continental interlinked trade routes, a complete bottom up development which lay the road for firms to plan a sustainable investment in one of the wealthiest economies in the world.

Moreover, it is a natural beauty full of natural resources that will attract top calibers while opening the chance for increasing local employment rates (Denning, 2017).

In fact, the organizational decision to relocate is critically linked to economic climate. Organizations usually interact with a steeping financial horizon by considering a downsizing decision (need to reduce overhead costs such as employees' headcounts, as fixed expenses); and particularly their facilities expenditure, with a sense of urgency that does not allow luxury for making efficient and systematic action (Bull & Brown, 2012).

2.2.2. RISKS OF ORGANIZATIONAL WORKPLACE RELOCATION

Furtherly, risks can be financial where organizational change by relocation, might affect, the short or long term performance; in other words, organizational aims for locational success is directly related to analyzing the comparative advantage over their competitors either by distributing their businesses over larger markets or by shrinking their activities in regions where business demands shrinks (Rothe *et al.*, 2014).

Usually organizational workplace relocations are linked to a sort of level of uncertainties where future possibilities of new premises, might not be able to, meet organizational future challenges and needs. This sets a challenge to organizational decision makers. A workplace relocation affects organizational work processes and work patterns alarming a degree of risk headed for organizational functionality. Additionally, corporate culture may be risked due to suitability of floor plans; handling the approach where workplace enables internal members to collaborate between each other as well as with external clients, intra- and inter-firm comparisons both play a distinctive role in distinguishing organizational interests and work as tools against relocation decision

uncertainty. It is substantial to comprehend that employees are not only affected by the decisions made and final location selected and work environment solution. They are also affected by how the process is carried out, whether they are involved or not. Moreover, their needs and preferences have to be taken into consideration (Rothe *et al.*, 2014). Henceforth, an underestimated uncertainty can possess an organizational strategy that does not preserve organizational aims against threats, neither will take advantage of opportunities that higher levels of uncertainty provide (Courtney *et al.*, 2000). Where, systematic approaches minimize risks (Biles & Ingrey, 1994).

2.2.3. QUESTIONING RELIABILITY OF ORGANIZATIONAL WORKPLACE RELOCATION

Organizational workplace relocation is not a simple activity regardless of its distance, as it involves several stakeholders, phases and decisions. Several authors have attempted to define workplace relocation as an unsystematic and a complex process. There is a lack of research focus on how employees experience and understand the process, rather than research studies for relocation outcomes (Rothe, Heywood, Christersson, & Sarasoja, 2015a; Rothe, Sarasoja, *et al.*, 2015). A survey conducted on 32 CEOs shown that 47% described their corporate relocation as successful, where 53% reported that moves were somewhat a little or not successful, such result in literature points out the need for an integrated framework which introduces considerable factors affecting organizational workplace relocations (Allard & Barber, 2003).

Larger firms follow a sophisticated measurement and modelling process, through their relocation decision. On the contrary, small firms base their relocation decision on “gut

feelings” or individual preference, rather than committing to an objective transparent and responsible approach (Nunnington & Haynes, 2011).

2.2.4. ACCOUNTABILITY OF ORGANIZATIONAL WORKPLACE

RELOCATION

Throwing the relocation planning and implementation decisions on a superior manager in the organization, as a side task, can be a risky choice for organizational relocations. As it assumes that relocations won't require much of experience or professional knowledge, while a successful change in workplace actually should be led by a professional, with a solid technical and managerial knowledge, focused on several quantitate and qualitative analyses, considering the bigger picture of the workplace facilities. It is essential for organizations to have facilities managers, to meet organizational needs as they shape workplace activities while engaging a significant amount of resources (Baccarini & Bateup, 2008). During change, facility managers are expected to demonstrate and utilize competencies and expertise in facility management, construction, real estate, planning, finance and budgeting, support services, technology, management, leadership and operations and maintenance expertise. They are all mandatory expertise, which effectively, eases initiating change, by relocation, to best fit organizational prosperity (Ehenberg, 2016). It is a realized factor in literature that organizational Individuals, do vary, in power, allowing influence of egos, during relocation process on taking the relocation decisions. Thus, it is difficult to argue positively that such selection decisions, are established without having an identified set of intended relocation benefits and motives. Increased transparency in accountability is a mandate, as this has to be kept fit, over the relocation lifecycle (Nunnington & Haynes, 2011).

2.2.5. EMPLOYEES INVOLVEMENT IN WORKPLACE RELOCATION

The workforce plays a major role in organizational success. Occupants of the workplace are most important and a tangible asset for any organization. The lack of a clear workforce strategy and planning, in some organizations, drive business decisions into failure. Despite its importance, it is often found that people are not carefully managed, planned, measured and optimized. In result, implementation of business holds a performance, which hardly meets business strategy. An apparent gap between workplace strategy and implementation is a common act, which opposes delivering a consistent employees' performance. Thus, workforce time and energy should be planned and engaged through relocation to deliver the prospected organizational objectives (Louch, 2014).

It is substantial to comprehend; that employees are not only affected by relocation decision. Either they are physically involved or not, furtherly they are responsive to the process carried out through the move. Moreover, employees needs' and preferences have to be engaged & considered. People build emotional links to physical environments through work, time spent and interactions at workplace. Living at a specific place over medium to long span of time with family responsibilities, build physical and emotional attachment to that specific location. Habits before and after work, do as well; all are valuable memories and routines, that are interdepending to a specific community. Thus, employees find it difficult to easily adapt to the relocation impacts. Hence, retaining employees' starts by understanding their needs. Thus, it is a crucial element to a relocation decision (Rothe, Sarasoja, *et al.*, 2015).

In literature, organizational workplace relocation has been found to be enhancing employees' productivity and satisfaction, by changing work environments, work behaviors and interaction at the workplace. Thus, a collaborative work strategies and environments would surely enhance employees focus, on work tasks, while in return, fostering a positive shift in client feedbacks. Relocation is an opportunity for an improved retention of talent and simultaneously opens premises for new recruits (in cases of growth); this is improving workplace attraction, bringing an enhanced talent and reduces churns cost (Rothe, Sarasoja, *et al.*, 2015).

2.3 RELOCATION STRATEGIES FOR THE ORGANIZATIONAL WORKPLACE

Successful organizations bring attention to interrelationship between all three elements: people, process and place. Nunnington & Haynes (2011) identified that starting a relocation decision, after leasing a property, is a common mistake that many organizations fall into as a result of being attracted to initial incentives and deals offered by brokers. It leads into expensive running costs, without closing the gap amid the actual organizational workplace space demands and actual facility setting of space.

It is required to follow an objective evaluation of organizational demands for space. DEGW & Office of Government Commerce in UK, developed and adopted a methodology for facility relocation starting by the process of analyzing & establishing workplace space demands before considering any governmental acquirement of a workplace facility. Nunnington & Haynes (2011) stated that a principal challenge today, for governmental workplace, is to shift space design focus from policy advisory to service delivery. This is

a clear outcome of workplace for a government to demonstrate a clear return on investment to the public. This can be achieved by shifting governmental offices into a project, managing prospects, rather than being a space of service only cuffed by rules. Furtherly, the authors' highlighted flexibility, as a key consideration, in workplace design thinking as it reduces public spending and increases potential space changes, meeting its functional needs. Realization of flexibility in workplace is highly accompanied with increased openness, collaboration, communication and flexible working. Furtherly, organizational image is a very important factor to consider specially for governmental workplace as appealing work environments improve the output efficiency and adds identity to the organizational government body (Nunnington & Haynes, 2011).

A vital common mistake in organizations, especially governmental organizations, is that relocation takes place in events of a (visible and cumulative) facility failure, rather than planning preventively, off reaching that point. The cost savings achieved by lack of occupying an efficient workplace are weighted out, in compare to sudden expenses imposed on organizations, and caused by unplanned immediate relocations. Since, it is a cause for business interruption, and it impacts employees' performance at work. Place has the strongest psychological impact on people and their behaviors; allowing it to become a key catalyst for a wider change (Nunnington & Hayness, 2011).

2.3.1. THE UNBIASED SPECIALIZED ACCOUNTABILITY

Corporate relocation is an effortful process. Because of the involvement of several challenging complex processes, alongside the restriction of time it must simultaneously

ensure continuity of business responsibilities, through insignificant interruptions. Many organizations did not think of relocation as a complicated process that it turned out to be.

A global data of 273 corporate leases between 2000 and 2010 indicated that average corporates lease length is around 4.5 years. Where (Rothe, Heywood, *et al.*, 2015a) authors' referred to practice of large organizations in Finland; to sign longer period lease terms; even some lease agreements are signed as "Until Further Notice". Based on typical lease terms in Finland, large organizations sign for 10 years on the average. Accordingly, it makes sense that organizations did not hold knowledge of a systematic process to manage workplace relocations, and lease durations forecasting.

Thus, a muddle of outsourcing relocation service has become a practice dependent on taking advice from landlords' or their representatives. This act possesses corporates at the hands of real estate agents tactics to market properties into business rather than doing the unbiased opposite. In this case, the interest is to benefit landlords and property owners' by swiveling corporate needs rather than implementing what an organization really wants. Thus, the authors suggest that it is of corporates benefit to hire an advisor with a specialized organizational relocation experience to ensure achieving corporate objectives in respect to it is available resources unbiasedly (Rothe, Heywood, *et al.*, 2015a).

In 1980s, large organizations mostly conducted workplace relocations decision based on budgets, timetables, surveys that were formulated internally while only involving move companies at the late stages of relocation. Nowadays, outsourcing of organizational relocation projects have become more common, thus a wider understanding of relocation services turned out to be the practice; as relocation companies started to offer pre & post

move services such as: total facilities management and turnkey services (Willett & Green, 1997).

During relocation, organizations with distinct use of advisory are more mature to succeed. Organizational workplace relocation is challenging, these fix demands for professional expertise managing the process. In workplace relocation sustaining employees in times of change is a skill that must be possessed carefully and professionally to avoid loss of knowledge and power. Furtherly, employees focus on core tasks does not get affected if a professional is set accountable of relocation, this shrinks workload disruption, concluded by a smooth & systematic process. Looking over a broader perspective, an improved understanding of relocation processes will ensure balance in real estate market among supply and demand. Further, a healthier and a more professionally performing market. It will pour into all market stakeholders' benefit; landlords, brokers, and organizations (Rothe, Heywood, *et al.*, 2015a).

Dependence on an in-house expertise especially for relocations that involve re-fitting, dilapidation cleaning and restoration, managing new premises can be costly specifically, when tasks are laid to senior managers, who have little expertise, on organizational relocations. Awareness of relocation business eases sort of access that an organization might lacks in a market. Thus, unbiased external service of a relocation consultant during initial assessments through workplace facilities design and its specification writing, formulating relocation methodology, planning time frame of the moves and other phases with respect to business commitments, conducting and supervising tendering and selection of contractors, movers, suppliers of furniture and technologies all with site management,

ended by post move management of activities. All should ensure capturing opportunities, into the organizational benefit (Ingrey-Counter & Biles, 1994).

2.3.2. SPACE INVESTIGATIONS: A JUSTIFIED INFLUENCE FOR THE MOVE DECISION

Several literature readings on relocation were found in journals with regional science and economic geography. Majority of studies focused on workplace relocation from the perspective of allocating location of the organizational workplace. While studies on change of workplace are found in corporate real estate, property and facilities management related journals but mostly from occupiers' perspective. While literature lacks investigating a generic process or methodology to conduct organizational workplace relocation (Christersson & Rothe, 2012).

There has been agreement in literature that Investigation of space must consider corporate size, culture, market stability and organizational available resources. However, it is a main responsibility of space planners at pre-relocation phase to investigate & develop workplace layouts that fit organizational needs utilizing available facility options according to defined set of budgets. Space planners are also required to be familiar with workplace zoning requirements simultaneously, to logically distribute staff to conduct set of organizational functions. Consequently, space management plan preparation is important to understand business processes, by listing and investigating organizational needs, staff needs and requirements, while respecting legislative requirements. All to be accommodated within workplace spaces, of a selected building, within certain budgetary limits (Baccarini & Bateup, 2008; Hassanain, 2010a).

A corporate has investigated its space management practices and found 40% of employees perform work without actual need to have personal workstations. Employees conducting service through emails, telephone and face to face interactions are more static in compare to those who are working in a workplace that implemented alternative strategies; this adds dynamics to organizational workplace. 20% empty slots of workspaces at old office spaces were wasted and counted as inefficient in terms of resources use. Then an alternative workplace strategy was introduced so that 5 out of 6 group employees had their own desk and the sixth had to use the empty desk instead of having one that serves him full time. A post move survey concluded that only 8% of employees have noticed improvement at workplace due to adoption of alternative work strategy, where 51% have marked their level of satisfaction as worse or much worse. This finding shows that implementing alternative workplace strategies is not always a cost-effective solution, where employees' perspective affects productivity. Thus, it is preferable to have a change planned, considering change in workplace strategy, but not on the account of employees' satisfaction. Moreover, the flexibility of space is found to be an important objective especially in organizations that follow a classic workplace strategy. It is fundamental to investigate employees' opinion over space utilization to close the gap through change and achieve a satisfactory workplace. Implementing new strategies for workplace requires delivering awareness among employees to adapt and create balance between drivers of change and need for stability against any possible resulted disruption (Bull & Brown, 2012).

Relocation of workplace is a genuine opportunity for organizations to experience either a complete change toward growth and development or to solve financial struggles and

business problems. At the same time, it is a challenging process where organizations concern their smooth continuity of operations while keeping an eye on work & business time losses (Krausz, *et al.*, 2002).

2.3.3. QUESTIONING THE BENEFITS: MOVE TOWARD BENEFITS

APPROACH

A benefit is an outcome that is favorable and advantageous. Benefits can be defined as a set of identified positive gains sought to be achieved & acquired by individual or a group of individuals. It is an important approach to identify benefits first; in order to deliver change through a systematic and well-thought, logical processes. Literature readings on benefits management led to a research conducted on office fit out projects at Australia in 2008. In which, a recommendation was pointed out that further studies and application of benefits approach would lead into a strong implementation of projects such as: relocation projects; by identifying factors driving relocation acts into delivering identified set of benefits (Baccarini & Bateup, 2008).

Successful benefits management models have common identification actions, such as: active involvement of project stakeholders, identification of benefits is an iterative process, pinpointing project key performance indicators that would enable project controls to limit nonconformities, furtherly covering projects from cradle to grave assure benefits realization over its lifecycle. Baccarini & Bateup (2008) listed benefits management stages as:

- **Benefits identification:**

Benefits identification involves stating and documenting expected outcomes of a project sought to be achieved over its life cycle. Business needs are pointed to be the main root driver toward benefits identification.

- **Benefits planning:**

This process explicitly defines activities and group of actions needed to achieve the planned benefits of a project. Using key performance indicators for every activity does not only assure realizing targeted benefits but drive holistically activities rhythm in a continuous manner. Moreover, it works as a monitoring tool to benchmark the actual implementation.

- **Benefits control:**

Continues monitoring of planned activities does not only assure achievement of benefits but also delivery of change and new ideas into the process that limit deviations from aimed benefits.

- **Benefits realization:**

It is the process of comparing actual benefits with planned and identified advantageous goals to be reviewed if realized through assigned activities. Also, it identifies the new benefits that may have been achieved through the project.

Subsequently change in workspaces has to take a percipient approach that impact organizational performance positively. Thus, it is of great importance to assure that design goals influence work performance; In terms of materials, finishes selection, specifications and workplace holistic design. This can be implemented by considering four levels of

design for office spaces which are: building shell (structure and skin of the building), building services (heating, lighting, ventilation and communications), scenery (interior components such as ceilings, partitions, utilization of outdoor views and finishes and workplace setting and strategy (furniture type, layout, readability and use of advanced technological equipment) (Baccarini & Bateup, 2008).

2.3.4. A TRI-AXIAL APPROACH: FLEXIBILITY, EFFICIENCY AND SUSTAINABILITY

Efficiency and flexibility are both dominating goals for an organizational workplace relocation decision. As the focus of such projects is to increase efficient use of space and to allow organizations cope with change over time especially on the medium and long perspectives of time (due to growth, downsizing, churn rate, business demand, change in organizational image and culture). A sustainable workplace promotes activities in different workplace strategies, as settings which accommodate varying occupants' types, while optimizing the use of every workplace component to serve organizational needs.

Formulating a relocation strategy requires an in depth understanding of organizational space demand, possible accommodation solutions and scenarios, researching trends being adopted for workspace solutions (Nunnington & Haynes, 2011).

A corporate relocation is an opportunity for ensuring workplace supply of space by matching organizational demand with optimal alignment to choices of facilities. This will prevent the selection of a mismatched workplace. This approach requires provision of a detailed set of criteria for evaluation such as: building location, space provision (net usable area vs. corporate space demand and head counts), building compliance to specified

requirements by assurance of minimal potential retrofitting of services, analyzing floor plates of the foreseen building (flexibility to adopt different types workspaces strategies), analyzing space layout to ensure that they support inter- and intra-department interactions (Nunnington & Haynes, 2011).

The continuous evaluation of workplace facilities is essential. The practice of post-occupancy evaluations, tests workplace integrity, among a set of organizational criteria either developed by business needs or employees participation (Nunnington & Haynes, 2011). The traditional methods of office planning & design by simply determining pieces of modular furniture for different grades and multiplying it by head counts, has become a risky approach, especially with the challenging augmentation in corporate buildings. A misguided choice of furniture or systems during relocation may indulge a costly impact sooner or later. Thus, selection criteria must always be evaluated iteratively over time and weighted in priority to achieve a careful and strategic workplace relocation decision (Allard & Barber, 2003).

2.3.5. APPROACHING ALTERNATIVE WORKPLACE STRATEGIES

R. Rees *et al.* (1998) introduced the term of alternative workplace strategies; it is a collective term used to describe adoption of new ways of work. Alternative workplace strategies empower different technological tools and territories to maximize space usage; considering optimum use of space in compliance with workers time spent inside and outside the workplace. These new alternative work strategies (AWS) allow organizational workplaces to save space, reduce space costs, increase productivity, allow greater access to natural light, deliver opportunity to diversify choice of furniture and finishes, allow for

openness by provision of collaborative spaces and fewer basic office sizes and promotes group work environments and activity settings that enhance interaction at workplace.

Adoption of flexible work schedules as an alternative workplace strategy has shown positive influence toward transportation problems especially due to crowded systems of Hong Kong. At Hong Kong for example, property prices are highest among the world, thus it is crucial there to utilize alternative workplace strategies. It is Important to consider real estate price while planning and designing of the new workplace. As a result, standard space (in m^2) per workstation is a considerable factor, that can be efficiently utilized by alternative work strategies. For example, Standard space per workstation at Hong Kong is (7m^2) in compare to (14m^2) at USA. Work force resistance and unwillingness to implement alternative work strategy has been pointed out to slow its implementation at the workplace (R. Rees *et al.*, 1998). Typologies of AWS can range as follows:

(On site - on premises) alternative work strategies:

Free Address: First come – first serve design strategy that is usually implemented in large open space with many workstations.

Hoteling: The workspace will be reserved on first call basis with specified occupation time and doesn't belong to a specific worker.

Group Address: A workspace that is for group of workers over specified time.

Shared Space: Two or more employees share the same workstation over different shifts or beyond agreed upon schedules.

Project Team Environments: The strategy ensures flexible workspace that adapts to different group formations and sizes.

Activity Setting: this strategy provides different zones that adopt different functions that fit diverse individual and group activities where distribution of the employees will be based on their task requirements.

(Off site - off premises) alternative work strategies:

Telecommuting: It is a home-based strategy linked by technology with workspace, usage of the actual workspace at office is for a day or more per week.

Satellite offices: Distributed office centers located near to employees' homes that afford proximity to remote work site linked by technology and administrative support.

Remote Tele-centers: work centers located near to customers site where employees split their function between different servicing locations.

2.3.6. BASIC APPROACH: ORGANIZATIONAL RELOCATION OF WORKPLACE AS A MODEL OF CHANGE

A proposed framework by John Hayes (2010) based on Lewin generic model of change management provides a fundamental understanding of the process of change. It sets basis for further research, related to change frameworks, by involving eight main elements that summarize headlines of change processes (Hayes, 2010):

1. Recognizing the need for change.

2. Starting the change process.
3. Diagnosis.
4. Preparing and planning for implementation of change.
5. Implementing.
6. Reviewing.
7. Sustaining.
8. Managing the people issues.

The process of change starts with recognition of need to change by perception, interpretation and decision-making processes. Then, actual change process takes place; this can be formulated in relation to the topic of organizational workplace relocation by translating organizational needs and aspirations into an act of change by selecting persons responsible of change either to manage or participate in one way or another. Then, diagnostic processes refer to review of organizational status and existing setting; this includes identification of a desired future state.

This process is sensitive as it is an opportunity to direct people motivation toward the relocation rather than allowing rumors to spread negativity among employees. The proper planning and phasing of each process is essential. Planning involves assigning lead times for deliverables, highlight and enforcing interdependencies and eases the distribution of use of resources for change while acknowledging internal and external organizational constraints. Then comes implementation of relocation which involves physical actions as planned; for example: to move the organization from state A to state B. Organization at this process has to be tentative. As the desired state may undergo iterative enhancements. Thus, implementing the change is an open iterative process but has been already planned

toward a direction of specific change. Then review of change has to consider the progression of change implementation and assure that milestones are met as progressed. Then, sustaining the change after organizational relocation, start by practice of the new work processes and business tasks, at the newly occupied workplace.

At this stage it is considered that organizational efforts have harvested the benefits by workplace relocation, while managing related impacts on employees, by including actions toward power, leadership and stakeholder management, communication, motivating others to change, support employees to help them manage their personal transitions, training and developing employees to enhance the productivity. To sum up, change should result in an efficient utilization of the people resource (Hayes, 2010).

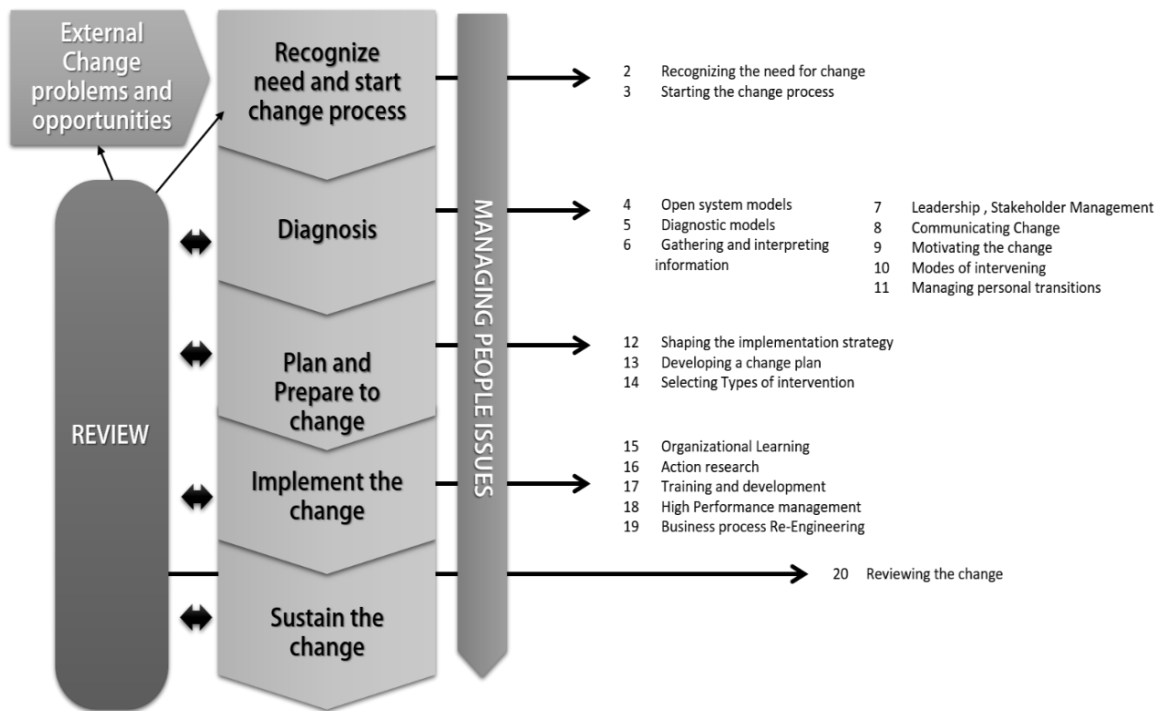


Figure 1 - Change as a process (Hayes, 2010)

2.3.7. IMPACTS OF WORKPLACE RELOCATION ON EMPLOYEES

RESIDENTIAL RELOCATION

Economic analyses of relationship between workplace and residence have focused in literature on the costs of different modes of transportation in urban agglomerations. The residential location decision in literature is described as a tradeoff between the desire for residential space and amenities. On the other hand, the assumption of increased cost impacts of commute by increasing distance. Thus, residential sites accessibility to economic activities locations is a dense residential preference in cities. It is evident by (Clark, & E. Burt., 1980) models and tests that relation between work location and residential location decision in times of organizational workplace relocation is an important aspect to be considered.

2.4 PREVIOUS STUDIES

The literature review reveals that most of the studies on organizational relocation, seek to introduce processes to execute and implement workplace relocation. Here are some of the few ideas proposed to increase efficiency of relocation management. The frameworks in literature, are explained below:

2.4.1. A FRAMEWORK FOR ERGONOMIC WORKSTATIONS AND WORKPLACE DESIGN

Workplace design can be a multilayered process that requires a conduct of qualitative and quantitative analyses. The shapes and layouts of offices surrounded by several set of elements such as cooling and heating equipment, IT, windows and allowance for accesses;

all affect workplace ability to be ergonomic. Furtherly, design affects occupants' business functions and their work performance.

Thus, ergonomic workplace is defined by (Marmaras & Nathanael , 2005) as the space of work where physical strains are minimized on the working person, in order to facilitate tasks execution and information exchange; an environment that ensures occupational health and safety while easing use of elements in the workplace. Marmaras & Nathanael (2005) highlighted interdependencies between tasks requirements, workplace components and working person to achieve an environment that is satisfying for body movements and posture, namely the ergonomics of the workplace.

2.4.2. THE DESIGN FOR ERGONOMIC WORKSTATIONS PROCESS

Marmaras & Nathanael (2005), developed a generic process for the ergonomic design of individual workstations at organizational workplace. The process acknowledged the particularities of workstations and workspaces design considering the work system, users, aggregation over seven identified phases:

1. Decisions about the resources and the high-level requirements

The process suggests that first step in design is to investigate the priorities by spending time with people who will conduct work at the workplace. Considering several set of goals such as achieving improved productivity, improvement of work conditions, innovation, occupational safety and health protection, importance of tasks conducted, privacies of working spaces, significance of tasks carried within workplace, the main goal of this phase is to ensure participation of occupiers in design while assigning design priorities. The importance of this phase is that it will affect the other consecutive phases of design process.

2. Identification of the work system constraints and requirements

This phase has essential effect on work system constraints and requirements. Considerations of the phase are: workstations design fit to work tasks, proximity of the workstation to adjacencies, analyzing technological tools and equipment that will be used (shape, dimensions and interfaces), environmental considerations and conditions surrounding the workstation (illumination, noise, thermal conditions, sources of cold or warm flow of air), considering exceptional situations such as electricity outings, fire and emergency situations and any other situation that may interfere with occupiers workstations. The authors highlighted recommendation to use set of standards such as (ANSI, EC, DIN or ISO) and any other legislative standards & requirements during this phase.

3. Identification of the users' needs

In this phase designer investigates physical characteristics and collects needs required by users' population for design; such as gender, ages nationalities, body sizes (anthropometries), physical abilities and limitations (biomechanics), visual and auditory perception abilities and limitations, previous work practices and experiences, any cultural and religious obligations and requirements; a local example such as Saudi ministry of labor requirements for female workers at work place.

Furtherly, analyzing tasks requirements such as interdependencies of work processes with workstations and it is elements, force exertions, whole body movement, and required modes of information exchange whether visually, kinesthetic (by physical interaction),

aural and sources of information, considering required privacies, analyzing proximities to broader workplace elements such as equipment.

The more detailed were these analyses prior for design of the workplace, the better were the results, of physical characteristics and task analyses.

4. Setting specific design goals

Considering productions of previous phases, designer team should be able to formulate specific set of design goals that should guide the choices and decisions. These goals will furtherly assist in conducting prototype assessment and guide for improvements. Goals such as: (cost per workstation, fit for departmental headcount capacities, incremental percentages targeted of productivity), specific spatial requirements for workstations and support spaces or facilities, design legislative requirements. “Agreement on these specific goals between design team, management and users’ representatives, is indispensable” (Marmaras & Nathanael , 2005).

5. Design of prototype

This phase includes making prototyping and tabulating workstations requirements based on design goals and priorities in each of the previous phases. Solutions to different working postures should be recommended (sitting desks, standing desks, support seating, or a combination of all) linked to specific task requirements. Furtherly, factors should be identified such as workstation clearance (minimum required placement of body considering largest user), height of workstations, clearance below workstations (considering hip width and thigh lengths data collected in third phase) all corresponding to 97.5 percentile of users population with allowance considerations, workstations

reachability (positioning of workstations and reach to workplace elements) considering smaller users reachability should surely ease reachability of taller personnel; Kineto spheres (a draw of common comfort zones of limbs reach) can be developed to analyze reachability and allow for workstation adjustability (ability to accommodate various modes and conditions of work postures), perception of necessary visual information, workstation maintainability, firmness, robustness, as well as safety issues such as rough corners, unrestricted evacuation.

Marmaras & Nathanael (2005) Stated that iterations among previous phases are necessary; it is impossible to identify all task requirements once from start.

6. Assessment of the prototype

Either analytical or experimental depending on project goals, time and importance; assessments can be performed using mock-ups or by application of a multi-criteria method by the design team. These analyses can then be a basis for next phase of design process (improvement of the prototype), as well to choose between different optioned design solutions. The assessment delivers valuable perceptions for eventual needs that may occur during implementation.

7. Improvements and final design

This phase should be completed with drawings for production, documentation of basis of adopted solutions, cost estimates for production of the ergonomic workstations and elements at workplace, provision of implementation manuals and guides if required.

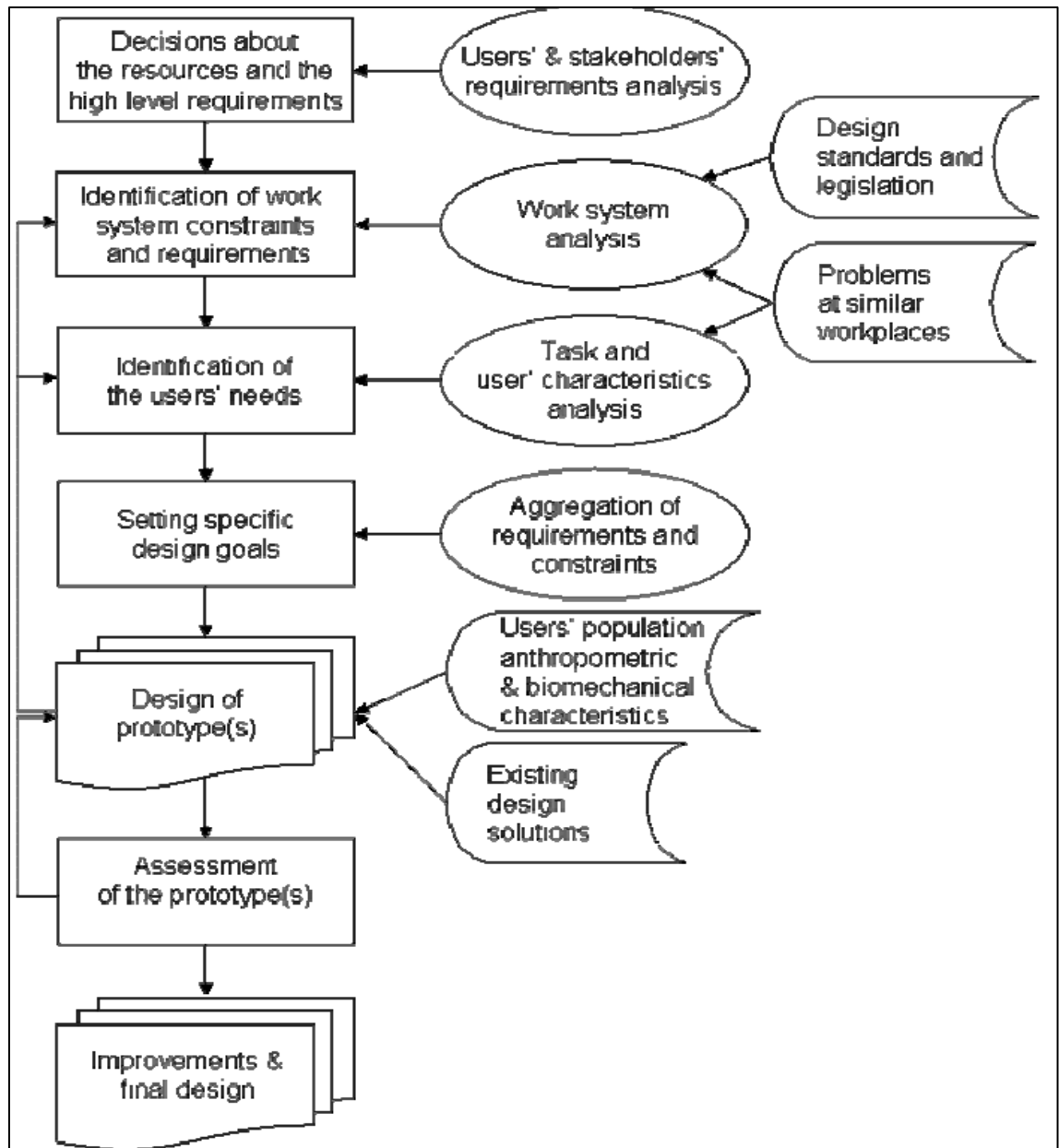


Figure 2 - Generic Process of ergonomic workplace design (Marmaras & Nathanael , 2005)

Marmaras & Nathanael (2005) then defined main stages of a method for office layout meeting ergonomic requirements. The process proposes a systematic methodology to design ergonomic layouts that serve office work tasks; the method links identified number of ergonomic requirements to several design stages:

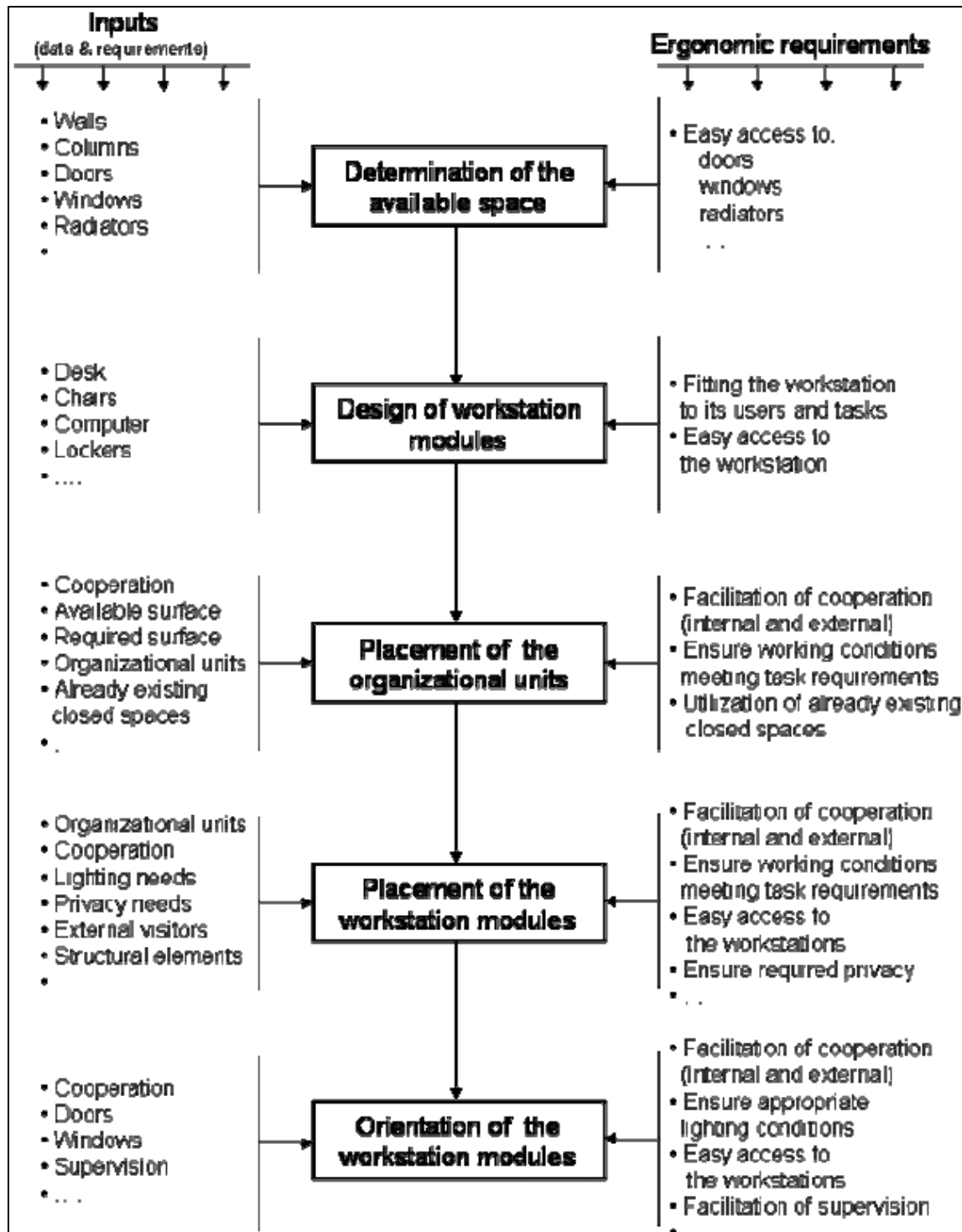


Figure 3 - Main stages of a method for office layout meeting the ergonomic requirements (Marmaras & Nathanael , 2005)

The process of making workplace layouts suggest that a design team must collect data based on workplace activities typology. Furtherly, number of departmental counts and total occupiers, expected number of external visitors and requirements, organizational hierarchies and departments, departmental list of carried out activities and required adjacencies with other departments or units, equipment and tools required for each work activity. The basic required drawings for prior for commencing design is structural drawings and other electro-mechanical systems within.

Stage 1: Determination of Available space

This stage is a determination of unfurnished space, to ensure passage through access doors and space areas for elements such as windows and radiators, as well as for manipulation and maintenance purposes. Determination of unfurnished space takes place by offsetting accessible distance from furnished space areas.

Stage 2: Design of workstation modules

This stage is conformity of workers needs requirements over furnished space areas into modules. Each module must have appropriate elements prior for the work activities, i.e. desk, seat, storage cabinets, visitors' seats, and any other equipment required for the work. The modular layout assists designers to focus on the overall workplace layout in compliance to individual workstation requirements.

Stage 3: Placement of organizational units

This stage aims takes into consideration five main issues that decide placement of different organizational units / departments:

- Each space shape.
- Each space exploitable area.
- Area required for each organizational unit.
- Desirable units / departmental proximity.
- Unique requirements of each organizational unit/department.
- The use of proximity diagrams and tabulations is facilitating the confusion of departmental units' placement by assigning weights and linking departments visually on grid that eases build of departmental block diagram.

Stage 4: Placement of workstations modules

Once adjacencies between organizational units and departments have been identified, the placement of workstations within each can commence. Ergonomic placement characteristics can be by defining zones for workstations conducting external interaction with visitors and clients near to entrance and placing the internal ones near to windows and more into inner spaces. Considerations such as placement with respect to supply of air of cooling systems help to minimize air streams impacts on workers and assures a better thermal comfort and sensing. Flexibility can be considered by providing electrical outlet boxes where it can be covered and closed if not needed and reopened where needed within floors and

walls. Provision of facilities for waiting and breaks is ergonomic as it adds to the satisfaction of visitors and employees as well.

Stage 5: Orientation of the workstation's module

This phase can be conducted simultaneously with the previous phase to assure better orientation of workstations with direct outdoor lighting, the use of anti-glare displays, and hoods will minimize eye fatigue and less direct glare.

Workplace design and layout of workstations is a complex process. Applying various guidelines mentioned above helps achieving an ergonomic outcome. There will be several contradictions which can be resolved by focusing on the important factors and requirements needed for the work tasks and business needs in a satisfactory manner to occupiers. The authors recommend an open-minded approach and assessment of alternative solutions by following the previously systematic process.

2.4.3. PERCEPTIONS OF PERFORMANCE AND SATISFACTION AFTER RELOCATION TO AN ACTIVITY-BASED OFFICE

Many organizations move from open-plan offices (OPO) to activity-based workplaces (ABWs). This study explored physical conditions, office use, communication, privacy, territoriality, satisfaction and performance change following a company's relocation from an open plan offices (OPO) to an activity-based workplaces (ABW). Mixed approaches were included by involving pre- and post-relocation surveys and post-relocation focus groups, individual interviews and observations. The questionnaire rated perceived change

in workplace environment changed from open plan office to activity-based offices. Results exposed that satisfaction with auditory privacy, background noise, air quality, outdoor view and aesthetics increased significantly after relocation. Where negative outcomes, such as lack of communication within teams, were perceived as being due to the high people-to-workstation ratio and lack of rules. However, satisfaction with physical work environment has been perceived as increased, in activity-based workplaces (ABW) in compare to open plan offices (OPO). Despite the fact, perceived performance did not change significantly (Rolfö, 2018).

The reasons behind implementing new office concepts such as activity-based workplaces according to Rolfö (2018) are:

- a) **Reduced overhead costs.** The study suggests that 90% of business costs is account for staff, thus recommends investigating performance and satisfaction between activity-based workplaces (ABW) and open plan offices (OPO).
- b) **Improved physical features such as:** temperature, lighting, air quality, office layout and furniture, provision of communication, provision of privacy and territoriality.
- c) **Open plan offices have shown reduced satisfaction & performance because of:**
 - 1) Reduced privacy: reduced confidentiality during communication with reduced visual privacy and lower information privacy.
 - 2) Increased level of distractions and unwanted observations.

An open plan office assigns workstation to specific employees where activity-based offices are non-territorial and promote flexi-desk and active choice of workstations. The study proposed that there is a lack of studies addressing the benefits of activity-based

offices in literature as well as summed literature findings on each type of workplace (Rolfö, 2018) as follows:

Comparison description	Open Plan Office	Activity Based Workplace
Flexibility to accommodate employees	Accommodates specific number of employees to specific number of workstations	Accommodates more employees than workstations
Clear desk strategy	Employees tendency to leave workstation without clearing is high	Promotes a clear desk strategy where employees are required to clear before leaving for other employees use
Co-working and teamwork quality	individual workstations might Limit teamwork activities and collaboration capability	Higher collaboration and flexibility in desking can increase teamwork quality
Territoriality and Departmental adjacency	Improved adjacency and unity for departmental activities	Lack of finding suitable workplaces and time consumed to gather colleagues might impact emergent tasks

Table 2 - Open plan office Vs. Activity based workplace (Rolfö, 2018)

2.4.4. THE CHANGING FACE OF RELOCATION MANAGEMENT

Willett & Green (1997) discussed the change in relocation industry by application of project management techniques to relocation projects & utilization of IT planning and scheduling tools. As the relocation consultants and commercial companies have transformed relocation industry and services into a wider scope. Large relocation & move

companies today, extended their services beyond traditional roles into a complete project management solution. As they provide complete fitout, employee relocation assistance & turnkey solutions by assigning a specialized project team to manage workplace move, from conception to completion. Their relocation services include:

1) Evaluating current working environments

a) Matching people to buildings

This service involves conducting various assessments to identify current and future organizational workplace demands in terms of commercial performance (growth, downsize, need to centralize or decentralize). at this stage all options remain available for study and assessment, until departmental collection of needs is formulated into an organizational vision that need to be investigated against a relocation decision.

b) Assisting alternatives

This stage and service includes assisting available options by drawing budgets for alternative decisions while assuring compliance to legislative requirements and communicating change with employees.

c) Evaluating methods of working

The evaluation of work methods supports identifying work challenges that require changes within working environment to improve its processes and methods.

2) Conducting accommodation studies

The accommodation studies help in identifying changes required within working environment to accommodate an optimum number of employees. In other words, it is an analysis of workplace layout and workstations designs to match employees count considering financial implications such as space cost per employee.

3) Analyzing and comparing costs and benefits of available options

This stage summarizes all previous analyses in terms of associated costs such as: property acquisition costs, property mechanical and electrical systems fitting and readability costs, IT and communication systems such as data & voice systems costs, portioning and furniture costs. Summing the analyses of all involved expenditure result in deciding the most financially favorable option.

4) Providing information used in the decision-making process

a) Relocation planning

The main goal of planning the organizational relocation is to keep interruptions to business tasks as minimal as possible, while assuring of integrity all relocation activities and stakeholders. The main outcome of the planning is to come up with a critical path for relocation project time frame.

b) Relocation scheduling

The scheduling of relocation activities is a detailed work description structured into project stages with high level of clarity supplied by relations of start and finish,

milestones to achieve. Usually, expressed in Gantt chart format. The relocation project manager will supervise and race to achieve the agreed upon milestones in the schedule planned; Serving the main aim to minimize work interruptions while provision of the newly workplace.

c) Records and archive management

Many companies take the opportunity of relocation to start rationalizing archive and documentary by transferring dead files and freeing office space at the new premises. As well as an opportunity to consider utilizing an electronic archiving system while using secure shredding and incineration of confidential documents that are no longer needed.

d) Utilization of labelling systems

While moves labelling systems play an effective role in relocation by ensuring assets delivery to new premises and allocation to a new responsible against prepared floor plans that plot labeled assets accompanied with description legend.

2.4.5. THE HUMAN SIDE OF RELOCATION

Bowker (1989) discussed several steps envisioned to spot various aspects of human considerations through workplace relocation that are often mistreated; in terms of considerations as follows:

1) Planning the relocation:

a) Plan the relocation project.

The relocation must take in consideration a float of extra time allowed employees adjustments and unexpected circumstances that may occur while implementation. The approach helps avoiding impacts of unforeseen lengthy delays.

b) Gather employee's information.

The relocation should involve an investigation of employees essential related information such as commuting modes, prices of area of living, schools and entertainment availability. Promoting awareness without inducing rumors among employees can be initiated through this phase by trying to match employee's data with new premises characteristics.

c) Research locations.

Considerations of relatively adequate stock of near residential areas and amenities to the newly premises while utilizing key surrounding amenities help in retaining high talent within the organization and improving employee's loyalty and satisfaction toward the organization.

d) Maintain confidentiality.

Many employees might have difficulty being objective during relocations; thus, its imperative that few people know the full details of the relocation decision in order minimize false rumors and allow for confidentially handling further employees concerns.

2) Announcement of relocation:

a) Present as much information as possible.

After the relocation plan has been formularized announcing every detail about the relocation is necessary to avoid any legal issues that may occur because of negative impacts of relocation on employees and to provide a transparent opportunity that is equal to all employees to manage the change accompanied by relocation on their daily life and routine.

b) Expect different reactions.

Relocation decision is not an easy change on employees; thus, its expected that organizations face different reactions from it is employees. The author suggests introducing supportive measures enthusiastically to minimize shocks and hostile reactions that might be reacted by employees.

c) Build trust and confidence.

Prioritizing employees investigated data and utilizing it in relocation decision builds trust and ensures organizational commitment toward employees whom are its most asset of. Hiring professional consultants who can deliver the sense of trust by advising and supporting employees supports organizational efforts to maintain talent by delivering sense of confidence to employees and advance esteem toward organizational relocation decision.

3) Considering employees housing:

a) Visit the new location.

Conducting group tours to new premises surroundings in an organized and supportive manner introduces new premises and ensures organizational relocation

decision effectiveness. As it ensures that near amenities and housing are suitably fitted for the employees and readily commutable to workplace.

b) Encourage family involvement.

Its of utter importance to consider impacts of relocation on employees' families. As relocation become an attractive decision if it helps improving family lives of organizational employees.

c) Personal counseling.

Providing counsel services assist employees to relocate easily and faster which indirectly ensures a minimal disruption to organizational works by enhancing employee's relocation experience. This is a necessary step specially for employees whom have never experienced a relocation before.

d) Practical help.

Forming contracts with move and packaging companies to support employees is a helpful and cost effective for employee's relocation. As it takes advantage of the situation by utilizing organizational resources to smooth and ease the relocation experience.

4) Dealing with staff who are not relocating:

a) Counselling.

The authors suggest taking care of employees who resist or will to not to relocate as negligence of such employees may have negative impacts on the organizational relocation. Furtherly, a documented notification should clearly the approach to be taken with those whom have decided to not relocate.

b) Job allocation assistance.

Legal requirements consideration of legal requirements related to relocation and redundancy should be ensured through several stages of relocation to ensure legislative fulfillment.

5) Conducting the relocation:

a) Involve employees.

Involvement of employees by visiting the new premises after its been fitted is important to organize for the move itself.

b) Greet the employees.

Welcoming employees at the new premises will help to build a trust in organizational decision and familiarize employees with the new premises.

2.4.6. THE ART OF SUCCESSFUL ORGANIZATIONAL MOVE

The paper discussed human factors in relation to organizational moves, tactics of conveying relocation information to employees and techniques used with relocation team members. The aim of this paper is to objectively ensure employees satisfactory expectations through an organizational workplace relocation. Organizational moves have evolved by research targeting minimal interruptions to corporates operation. *“a move is more than a mere process. A move is people, with all their shortcomings, needing to be coordinated in a common effort towards a common goal”*. Yet, Capasso (2003) suggested that facility managers fail to meet desired employees’ expectations. Capasso (2003) listed a set of relocation processed considerations to ensure a successful organizational move as:

1) Fundamental steps of relocation:

a) Assembling a core move team.

A solid move team assure prevention of modest moves. Provided inclusion of various technical team members such as IT Manager, financial manager facility manager, HR manager, move coordinator, furniture installer project manager, security manager, procurement manager, public relations manager and construction manager is necessary where available and needed to form an integrated team. The necessity of forming such team is dependent on nature and size of the relocation project. It is essential to optimize the number of members involved; as large number must be resisted since it decelerates the time needed for key decisions. Capasso (2003) suggests that seven to nine members are most effective for a relocation team with addition of cleric member to increase the members focus on decision making and relieve time consuming tasks of documenting and note taking during relocation phases. Criteria for core team members selection are:

1. Member reliability.
2. Member relevant experience and knowledge of workplace moves.
3. Sense of ownership and responsibility.
4. Ability to delegate assignments and achieve tasks that serves relocation objectives.
5. Commitment to the move.

The core team meetings must be recurring, held at a specific location with a firm frequency and their durations may vary based on workloads (the more the longer).

A reviewed clear meeting minutes for each session is imperative, to devise a supporting documentation of relocation decisions in forms of:

- **Issues list and registers:**

List of actions that requires decisions to be completed. The list will drive solutions to issues and concerns that may rise through the process.

- **Assignment logs:**

To arranges tasks and decision items by responsible team member.

- **Meetings (serve as a communication tool):**

They keep all stakeholders informed and updated about the detailed status of process progression.

- **Meetings (serve as an authorization tactic):**

They serve the need for approvals by higher management by conveniently reporting updates and attaining approvals.

b) Selecting department move coordinators (DMCs).

The role of the DMCs is to convoy necessary information between corporate departments employees and core move team. Thus, effective communication is ensured for the move coordinator without loading them with time consuming task of reaching each department and focus efforts on relocation plans and decisions. It would be a hectic process if the move coordinator have to repeatedly explain the requirements and information of relocation processes to each department. Thus, the study suggests assigning a coordinator for each department. The study suggests the following tasks to be handled by DMCs:

- Making respective employees informed about moving processes.
- Oversee and assure packing of common use files and office supplies on individuals' level.
- Assure physical relocation of individuals during relocation planned time frame.
- Help employees and accompany them into the new facility.
- Oversee proper placement of office innards (workstations, equipment).
- Sweep old locations and spaces to assure complete relocation.
- Greet staff and commence works at first day of occupancy.
- Collect snags reported by employees such as missing items during relocations.
- Coordinate with movers and installers as per final design and relocation layouts as agreed and formulated by core team members.

Capasso (2003) suggests a representative for each department. Where in huge organizations there might be an assignment of a DMC team depending on the employees' size. A ratio of 1:2050 employees is suggested, whereas for more sensitive staff such as lawyers, executives a lower ratio should be considered. Where in more monolithic groups such as programmers, CAD operators etc. should have a larger ratio. In other words, regardless of the designation there should be a key representative to serve each groups' welfare. Also, suggests that DMCs must be able to devote 25% of their daily workload time during actual relocation duration. This can be accomplished by the cooperative understanding between DMCs and their respective supervisor. Criteria for department move coordinators selection are:

1. To be frequently available at office with little business travels and outdoor routines.
2. To have a good understanding of departmental requirements and work processes.

3. To possess leadership and communication skills.
4. To be recommended by departmental head and has direct access with him.

c) Determining number of relocation phases.

The phasing of actual relocation is likely to take place in corporates where employees counts are in hundreds. Regardless of number of monolithic groups of employees, it might not be sensitive to phase the move but depending on departments and new spaces readability to be occupied; as well as impacts on business necessities. Capasso (2003) suggests a range of 150 - 200 employees to be relocated each time. Fewer phases shorten duration of disruptions where more phases increase the duration of disruptions. Fewer phases will increase the number of departmental coordinators required to support the intensive move of employees where in more phases scenarios a focused number of departmental coordinators will be utilized. Hence, its preferable to study the move phases with sizing to minimize business interruptions and assure a fairly, properly managed procedures for each employee that decreases potential struggles. Factors suggested that affect phases sizing: Intensity of works disruptions and durations of acceptable work disruptions.

d) Developing a plan for each phase.

- **Determining who goes when:** there are different ways to handle group priorities during relocations such as by building or floors so that movers can start area by area with more focus on phasing rather than being scattered. Precedingly that it is sensitive to works priorities and strategy for preventing business interruptions.
- **Departmental interdependency:** the move coordinator while planning the phasing of relocation must keep in mind physical work interdependencies between

departmental. Such consideration is essential so that it doesn't holdup business processes during relocations.

- **Preparing for building access:** depending on relocation plan, stakeholders and parties involved in relocation, a security control over building access and background check of any outsider staff or move workers must be conducted. The provision of identification cards during the move will help security guards and supervisors to check on permissions given to each respective individual.
- **Shifting between phases:** Capasso (2003) suggests that after each phase of moving employees and while preparing next movers it is necessary to pause any adjustments or changes required by those who moved in. This is to firstly complete the move and avoid time delays that may be caused by discretionary changes. people must adapt with new workplace environment at least for six weeks before any further changes can be requested or made so that an overhaul understanding of changes and requests reported can be conducted to formalize post move change decisions from a holistic perspective.
- **Starting move on weekday where it makes sense:** depending on organizational status and employees' workloads during weekdays, a move during night shifts may be arranged or during the weekdays where work tasks and exposure to clients is minimal. Also, spaces like libraries or common archive areas can be transferred during weekdays as they might directly interrupt organizational works.

e) Deciding upon existing, old furniture and acquisition of new furniture

Considerations of cost impacts by pursuing new furniture is essential to be conducted by decision maker. Stating that old furniture would do the job to minimize

costs is not a professional way of conducting a relocation decision. A financial, aesthetical evaluations, amount of works and coordination needed, and time impacts must be taken into consideration while deciding upon the allocation of old furniture. Moreover, the responsibility of dismantling old furniture and assembly at the new workplace Premises/facility/facilities is critical specially when furniture are integrated with different IT, phone, communication equipment and systems. The impacts of new Furnitures on employees and the corporate is way more beneficial as an opportunity to achieve (Capasso, 2003): better ergonomics, improved workplace aesthetics, employees productivity, attraction to the new workplace, improved trust in corporate culture by employees, improved wire management, assurance of adequate and relevant storage, improved task lighting, alternatives to new furniture: Other alternatives to buying costly new furniture is to pursue refurbishment and adjusting old furniture but disadvantage of such decision is that it prolongs the move process of relocation. Otherwise, purchase of partially new or refurbished furniture can be an effective approach depending on the physical quality of the existing furniture & assets.

f) Planning of equipment and technological requirements.

Workplace relocation is best time to consider and for planning an IT infrastructure upgrade specially voice and data networks. Capasso (2003) recommends to plan the move at times where IT equipment and services leases expire to enable introduction of new conjunct systems and services.

g) Selecting movers and installers.

2.5 PRELIMINARY IDENTIFICATION OF THE FACTORS AFFECTING (PRE-RELOCATION PHASE) OF ORGANIZATIONAL WORKPLACE RELOCATION

Several references of literature have been reviewed, leading to preliminary identification of thirty-four factors in total. Then, several terminologies were combined against literature definitions to formulate definitions for the preliminary identified factors:

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
1.	Analysis of business needs for relocation	Workspace to execute business strategy (Allard & Barber, 2003), characteristics of business service affecting demand for offices (Adnan, Daud, Ahmad, & Aziz, 2009), "Organizations have been adapting workspaces to suit the organization's needs" (Candido et al., 2019), "Linking facilities to core business strategies" (Roper, Kim, & Lee, 2009).	- "objectives of the organization's premises strategy were to develop the facilities so that they support the changing needs of the core business area" (Hiltz, 1999) - Re-location is associated with circumstances where a company is looking to change their current location."(Balbontin & Hensher, 2019)	- Conducted business analyses that drive relocation decision, through needs to fit the changing space demands of an organization.
2.	Organizational culture & image requirements	"Company culture", "corporate image" (Hills & Levy, 2014b), "workplace culture", "image of the business" (Hassanain, 2010b), "improving a company's image"(Balbontin & Hensher, 2019), "workplace culture, organizational culture and corporate culture" (Cole, Oliver, & Blaviesciunaite, 2014), "Culture", "culture of the organization", "image", "Image Features" are criteria to consider for offices classification. (Adnan et al., 2009)	- "To adapt workspaces to suit the organization's needs, including those under the brand, culture and talent attraction/retention umbrellas". (Candido et al., 2019) - "conveyed symbolic company information in the form of imagery that people assign to organizations." (Lievens, 2017)	- All requirements, that convey organizational symbolic information, imagery that people assign to an organization's name, to an organization net cognitive reactions, associations; the characterize organizational prevailing values, attitudes, beliefs, artifacts and behaviors; emerging a distinction of one institutional context to another & contribute to its sense of order, continuity and commitment .

Table 3 - Preliminary identification of the factors affecting (pre-relocation phase), factors: 1 & 2.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
3.	Condition of existing facilities and assets	“a clear understanding of assets and capabilities” (Roper et al., 2009) “Assessed condition of objects”(Lützkendorf, Speer, Szigeti, & Davis, 2005) “Deciding what to do with the furniture”, “Advantages of new furniture” (Capasso, 2003) “Condition of the facility / building” (Wahida, Milton, Hamadan, Lah, & Mohammed, 2012) “Assets Evaluation” (Christersson & Rothe, 2012a) “Considering the move of existing assets” (Hassanain, 2010b)	- “the process of evaluating assets owned by the organization aiming for determination of maintenance needs to support their activities and service” namely a condition assessment is the best tool for decision making upon a sustainable asset management. (Wahida et al., 2012) - “Building Condition Assessment is a complete review of the current state of a building to determine their current condition and estimated cost to correct any deficiencies. It is provided in a report format, often including photographs and diagrams outlining problem areas, needed updates or improvements and problems.”(Roper et al., 2009) - “The decision whether to reuse or buy any or all new furniture; assessment of the extra time and cost of moving the existing furniture while there is a window of opportunity to buy new furniture and IT” (Capasso, 2003)	- A conditions survey of technical, operational and maintenance requirements and data of assets at the existing facilities to decide upon the assets that can be salvaged; a tool for assessing the gap between existing premises and prospected.
4.	Employees Needs	“Knowledge workers have needs from their workspace” (Hills & Levy, 2014b), “a tailor-made workplace design must for the user”(Hiltz, 1999), “peoples’ needs” & “needs of employees” (Candido et al., 2019), “occupier satisfaction”(Claire Sanderson & Mary Edwards, 2016), “employee participation”(Rothe, Heywood, Christersson, & Sarasoja, 2015b), “to meet end-users’ needs”(Islam, Nazifa, & Mohamed, 2019), “planning for and management of end-users’ needs”(Hebert, 2012), “employee participation”(Rothe, Heywood, et al., 2015b), “User requirements”, “Comfort” . (Adnan et al., 2009)	- (Christersson & Rothe, 2012b) defined employees needs from a social perspective as all characteristics and factors that impacts employees reactions to change, turnover, satisfaction and well-being, ways of working. -“to understand the activities, processes and perceptions that take place within office environment by investigating the key issues that contribute to employee dissatisfaction” (Hills & Levy, 2014b) -“employees sense of autonomy, competence and relatedness at work, are all considered influential factors on workers’ performance and wellbeing” (Candido et al., 2019)	- All factors affecting and supporting satisfactory conditions (environmental, economic, and social) for the employee at the workplace to promote sense of autonomy, creativity, identity and well-being.

Table 4 - Preliminary identification of the factors affecting (pre-relocation phase), factors: 3 & 4.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
5.	Functional Workplace Needs	“Functionality” (Adnan et al., 2009), “Functionality of buildings and the working conditions they offer” (Elżbieta Niezabitowska & Winnicka-Jasłowska, 2011), “functional elements”, “Aspects of functional elements” (Hills & Levy, 2014b), “Functional requirement” (Roper et al., 2009), “functionality - space efficiency”(Safian, Bagdad, & Nawawi, 2011), “functional needs of diverse work types” (Wineman & Barnes, 2018b), “functionality “ (Preiser & Vischer, 2008), “Functional needs”(Brady et al., n.d.), “Functional factors”, “functional requirements”, (Hassanain, 2010b)	- “functional (adj) performing or able to perform a regular function; designed or developed chiefly from the point of view of use; being suitable for a particular use or function.”(ASTM International, 2013b) “The way the space is arranged that will impact the way employees work” (Adnan et al., 2009) - “to understand the activities and processes that take place within office environment considering employee perceptions of how workspace design affects their sense of well-being and productivity”. (Hills & Levy, 2014b) - “A significant aspect of workplace planning related to the operations and activities of the organization is in the development of workplace solutions to respond to the multi-faceted types of work and ways of working”(Hassanain, 2010b)	- All factors related to the development of workspaces, workplace solutions, selection of assets to meet the performance, purpose requirements of work activities and organizational business services; to enable productive response to the multi-faceted types of work and ways of working.
6.	Technical Workplace Needs	“technological novelties”, “Building intelligence” (Elżbieta Niezabitowska & Winnicka-Jasłowska, 2011), “understanding of technical requirements and solutions”, “technical requirements” (Rothe, Heywood, et al., 2015b), “technical requirements”(Capasso, 2003), “accommodating new technologies” (Hills & Levy, 2014b), “Qualities of buildings” (Adnan et al., 2009)	- “The technical factors relate to the health and safety of staff and visitors using the building. Considerations in this category are derived from the existing conditions of the facility as well as the mandates of the legislation for achieving a comfortable, safe and healthy workplace environment”(Hassanain, 2010b) - “criteria that allow an architect or interior architect to design the building or space using standards or metrics” (Roper et al., 2009)	- All factors relate to the development, design of workspaces and organizational built facilities; planning IT and integrating systems based on metrics and standards to ensure satisfactory legislative mandates of performance in order to achieve a comfortable, intelligent, safe and healthy facility and work environment for the organizational tenants.

Table 5 - Preliminary identification of the factors affecting (pre-relocation phase), factors: 5 & 6.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
7.	Location of New Premises	“Location”, “neighborhoods” (Kopczewska & Lewandowska, 2018), “Location” (Nitsch, 2006) (Rothe & Heywood, 2015), “Locational attributes” (Adnan et al., 2009), “Location”, “Location of commercial feature”, “availability of transport options” (Safian et al., 2011), “Locations” (Bowker, 1989), “Satisfaction with location” (Claire Sanderson & Mary Edwards, 2016)	- “Address of a firm, data geocoded using a GIS software, defined by coordinates” (Christersson & Culley, 2018) - “locations are the physical environments that incorporate the buildings, defined by a site-specific property lines; serves to support and achieving business facility goals” (Roper et al., 2009)	All factors relate to selection of absolute location for the new organizational premises; addressed by global and local externalities, defined by specific site property lines, coordinates, serves to support organizational facility goals.
8.	Proximity aspects to amenities	“Site amenities (parking, recreational spaces, etc.)” (Lützkendorf et al., 2005), “Availability of parking spaces”, “distance to local public”, “transportation”, “distance to long distance public transportation”, “distance to city center”, “distance to a bank”, “distance to a post office”, “amenities” (Adnan et al., 2009), “Landscape”, “Bank, postal, retails”, “Gym, health club”, “Restaurants/ café”, “Pantry/ children nursery” (Safian et al., 2011), “accessibility (to train station, to interstate highway, among others)” (Balbontin & Hensher, 2019), “Proximity” (Carrincazeaux & Coris, 2015), “Access to Amenities” (Adnan, Daud, & Razali, 2015)	- Relative location is “the distance to the closest subway station, given as the function of distance to e.g. the public transport network, captures the spatial characteristics of the city and plays the role of proxy for connectivity” (Kopczewska & Lewandowska, 2018) - “An absolute location in city districts, especially an address in the Central Business District (CBD) or outside it, usually given as a binary value, may serve as proxy for centrality” (Kopczewska & Lewandowska, 2018) - “satisfaction with views from work area and with the connection with the outdoor environment” (Candido et al., 2019)	- All factors that relate to the selection of relative location for the new organizational premises; addressed by proximity to spatial characteristics of the city such as (public transports, business districts, commercial areas, public terminals, major city services) defined by distances and travel times that support organizational facility goals and tenants modes of commute and satisfaction.
9.	Assessment of skeletal characteristics of the new premises	“structural characteristics”, “structural variables” (Kopczewska & Lewandowska, 2018), “Access and Circulation”, “efficiency in structural orientation”, “Building Configuration and Building design” (Adnan et al., 2009), “Lobby design”, “Number of Storey”, “Age of building”, “External design”, “Floor size”, “floor ceiling height”, “column layout”, “floor loading” (Safian et al., 2011), “main structure and the core service areas” (Hassanain, 2006), “Building floor shape”, “column location, spacing, ceiling grid”, (Best, Langston, & Valence, 2011), “Structure” (Arge, 2005), “A building involves three major components, including architectural (façade, painting, tiles, and ceilings, among others), structural (beam, slab, and frames, among others),” Architectural components”, “Structural components” (Islam et al., 2019)	- “Evaluate (a facility): to assess the capability of a facility to perform the function(s) for which it is designed, used, or required to be used.” (ASTM International, 2013b), (ASTM International, 2013b) - “combination of features, n—of a facility, two or more features which, when present together in a facility, affect a level of serviceability of that facility.” (Wilson, 1990) - “the capability of ensuring that the workspace can be configured and re-configured to suit different building occupants, their changing needs, work processes and layouts” (Hassanain, 2006)	- All the aspects related to facility characteristic such as core and shell that may limit changes or changing accommodations and functions of space design for the organization.

Table 6 - Preliminary identification of the factors affecting (pre-relocation phase), factors: 7, 8 & 9.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
10.	Assessment of building services and systems characteristics of the new premises	“Services”(Arge, 2005), “Availability, support and potential of systems and installations for processes (power & water supply, lighting, alarms, HVAC)”(Lützkendorf et al., 2005), “building services”, “service perspective, reliability and responsiveness” (Claire Sanderson & Mary Edwards, 2016), “Energy-efficient air conditioning equipment” (Elżbieta Niezabitowska & Winnicka-Jasłowska, 2011), “Services”, “power”, “elevators and restrooms”, “Utility cost”, “power capacity and availability of backup power”, “Availability of chilled water”, “availability of speed elevators”, “mechanical”, “tenant risers”, “lifts”, “electrical”, “standby power”, “building management”, “communications”, “hydraulics”, “building features” and “building amenities”(Adnan et al., 2009), “MEP (plumbing, fire protection, HVAC, elevators, circuits, and cables among others) systems”, “MEP components” (Islam et al., 2019)	- “Building systems encompass mechanical, electrical, security, safety, information and communication systems. The systems are installed to support the required business functions of the building, so it is essential that they can be carried out without interruption in meeting the users’ needs, through reliability resulting in cost effectiveness throughout the whole life cycle.” (Wu et al., 2006) - “building system: collection of equipment, facilities, and software designated to perform a specific function.”(ASTM International, 2013b) - “Evaluate (a facility): to assess the capability of a facility to perform the function(s) for which it is designed, used, or required to be used.”(ASTM International, 2013b)	- All factors relate to design, selection of organizational facility/ facilities ensuring that the workspace can be configured and re-configured to suit different building occupants, their changing needs, work processes and layouts from a building services & systems point of view and to assess the capability of a facility to perform the function(s) for which it is designed, used, or required to be used over its functional life.
11.	Flexibility / adaptability at new premises	“Flexible office concepts”, “Flexibility was one of the main aims of the relocation project” (Søiland & Hansen, 2019), “develop the facilities so that they are flexible, convertible to use.” (Hiltz, 1999), “workplace flexibility” , “Flexible”, “Adapt” (Lahtinen, Ruohomäki, Haapakangas, & Reijula, 2015), “fixed-flexible working”, “flexible offices”, “flexible work environment”, “workplace choice and mobility” (Göçer, Göçer, Ergöz Karahan, & İlhan Oygür, 2018) , “mobility and flexibility”(Jylhä, Vuolle, Nenonen, & Virtaneva, 2015)	- “workplace flexibility as the ‘degree to which organizational features incorporate a level of flexibility that allows them [organizations] to adapt to changes in their environment”(Jeffrey Hill et al., 2008) - flexible offices “provide different workstations hosting various work tasks while increase productivity through the stimulation of interaction and communication while retaining employee satisfaction and reducing the accommodation costs” Göçer et al., 2018) - “Flexibility is the ability of a building to meet changing functional user or owner needs by changing its properties easily” where adaptability is “dependent on the three elements : flexibility, Elasticity & Generality” (Arge, 2005)	- All factors related to degrees of choices at workplace facilities, spaces and locations of work; which enhances workers ability to conduct work related tasks, interactions, communications, more flexibly and enhances sense of equality effectively while adapting changing variety of task demands optimizing space for changing functional needs of an organization.
12.	Sustainability measures at the new premises	“sustainability” (Hills & Levy, 2014b), collaborative work environments which promote “sustainability”(Perera, Perera, & Jayasena, 2019), “Sustainability affects every level of organization” (Abdelfattah, 2018)	- “the development that meets the needs of the present without compromising the ability of future generations to meet their own needs”(Abdelfattah, 2018)	- All factors related to the efficient management and use of built assets throughout its life cycle ; by making it sustainable and reduces building impacts on human health, wellbeing and environment.

Table 7 - Preliminary identification of the factors affecting (pre-relocation phase), factors: 10, 11 & 12.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
13.	Operation and Maintenance requirements at the new premises	“Long-term maintenance plan”, “Operating expense analysis”, “Life cycle cost analysis/whole life cost analysis”, “Maintenance management”, “Durability & Quality”, “Operation and maintenance”, “Premium Presentation and Maintenance” (Adnan et al., 2009) “cleanliness and security”, “reliability and responsiveness”, building maintenance, the quality of fittings, internal climate and the appearance of the building” (Claire Sanderson & Mary Edwards, 2016) “operation and maintenance manuals and operator training materials”, “workers comfort” (Wijerathne, Karunasena, & Mallawaarachchi, 2012)	- “Maintainability: capability of a system or facility to be maintained to a specified level of reliability, at a specified measure of cost or economy”(ASTM International, 2013b) - “Maintenance is defined as the combination of all technical and administration actions, including supervision actions, intended to retain an item in, or restore it to a state in which it can perform a required function”(H. H. Y. Lee & Scott, 2009) - “operating cost, n—the expenses incurred during the normal operation of a building or a building system or component, including labor, materials, utilities, and other related costs”(ASTM International, 2014)	- All aspects affecting necessary actions to maintain an optimal condition and operation of the new premises; to retain, restore a building asset, system, component driving quality operation of utility and built facility; resulting in an efficient and effective use of workplace assets, its services while sustaining its value.
14.	Development of relocation plan & schedule	“Planned” relocation (Christersson & Rothe, 2012a), “Planning documentation (objectives, rule documents)” (Rolfö, 2018), “Planned” relocation (Christersson & Rothe, 2012a), “Time planning”(Ciaramella & Dettwiler, 2011), “project management - scheduling” (Rothe, Heywood, et al., 2015b), “Relocation planning” (Willett & Green, 1997)	- “The coordination of many diverse activities toward a common goal”(Kelley & Walker, 1959) - Planning is “to establish the objectives and processes necessary to deliver results in accordance with customer requirements and the organizations policies”(ISO, 2018) - Time planning is “to define a timetable for the management of the various stages (analysis of needs, identification of the area or of the new headquarters, transfer management, etc.), mainly due to factors the company cannot directly control: the times required to purchase the area, the divestment/sale times of the old head office, the time required for the necessary authorizations/permits to be issued, etc.”(Ciaramella & Dettwiler, 2011)	Time analyses of all diverse relocation activities over a specified study period toward the goal of identification of relocation objectives to effectively coordinate and manage implementation to new premises and movement of all personnel and assets.
15.	Formation of divisions’ move teams/ identification of relocation stakeholders	“Stakeholder panel” (Mazzarol & Choo, 2003), “board members, presidents, division heads, departmental directors “ (Balbontin & Hensher, 2019), “Establishing who is responsible” (Capasso, 2003), “executives within the company”, “relocation consultants” (Mazzarol & Choo, 2003)	- “actors who may have an impact on business location decision”, Influencers are “those who influence the decision making process”(Mazzarol & Choo, 2003) - “stakeholders, n—anyone who affects the project or is affected by the project; other than the owner/user”(ASTM International, 2014)	- The coordinated formation of all organizational internal actors and identification of external stakeholders affected, involved and impacted by business relocation for the goal of accomplishing relocation to new premises.

Table 8 - Preliminary identification of the factors affecting (pre-relocation phase), factors: 13, 14 & 15.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
16.	Allocated budget for relocation	“cost of moves”(Islam et al., 2019), “The cost impact should be analyzed, not assumed”(Capasso, 2003), “cost estimation” (Rothe, Heywood, et al., 2015b), “Relocation cost per person” (Attwood, 1996), “Investment costs”, “Design & Planning costs”, “Building and Construction costs”, “Operation and Maintenance costs”, “Demolition and disposal costs”, “Unit costs (power, fuel, space, services personnel)”, “Total cost of ownership”, “External costs are all mentioned as categories and criteria for costs performance” (Lützkendorf et al., 2005)	- “benefit-cost analysis, n—a method of evaluating projects or investments by comparing the present value or annual value of expected benefits to the present value or annual value of expected costs.”(ASTM International, 2014) - Cost benefit analysis is “a technique used by decision makers in the clarification and ordering of the data input to a problem, it’s not a methodology but more of a solution to problems that indicate the direction of leading to a solution. It aids the manager to find the most effective allocation of resources and funds“ (Hiltz, 1999)	- All analyses of costs for the purpose of modifying, adding new systems, construction, design, engineering, acquiring new assets, planning and move-to the new premises considering technicalities; most effective distribution of available fund to achieve the relocation plan objectives.

Table 9 - Preliminary identification of the factors affecting (pre-relocation phase), factor: 16.

2.6 PRELIMINARY IDENTIFICATION OF THE FACTORS AFFECTING (RELOCATION PHASE) OF ORGANIZATIONAL WORKPLACE RELOCATION

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
17.	Availability of accurately coordinated and complete relocation documents	“Specification document”, “generates the definitive schedule of finishes, materials, fixtures and fittings for ordering and construction purposes” (MARIS INTERIORS LLP, 2014), “The move manual” (Capasso, 2003), “Implementation Strategy” (Lin, Foster, Chaboyer, & Marshall, 2016), “preparation of preliminary layouts”, “preparation of bid documents” (City of Somerville, 2019)	- “facility project brief (statement of work): document describing services to be provided by the design consultant (architect, engineer, or interior designer) for a facility, in detail sufficient for the design to proceed; Including general project information specifically related to the project, such as functional, technical, and design requirements; time plan; cost plan; and technical design data.”(ASTM International, 2013b) - “Specifications are drawn up to complement the concept and detail design stages of the design process and to provide a clear audit trail and benchmark of the quality standards for the project.”(MARIS INTERIORS LLP, 2014)	- The process toward delivery of achieving a successful relocation documents and plans that convey detailed and coordinated select of design requirements necessary to initiate contracts of the new workplace premises within a specified timeframe; according to specifications, codes and regulations.
18.	Identifying means of access for move activities	“Preparing for building access”(Capasso, 2003), “safe, unassisted and convenient means of access”, “accessible”, “unobstructed entrance”, “clear opening width”, “unobstructed spaces”, “correctly guarded”, “reduce the incidence of slips, trips and falls”, “maneuvering space for both people and furniture, routes”, “direction, junctions”, “clear of any obstruction”, “turning circle” (Scottish Government, 2017), “adequate lobby depth for people to move”, “adequate for safe circulation”, (Centre for Excellence in Universal Design, 2012)	- “Preparations made in advance with the security officials or the landlord’s representative for moving with the least special needs, choosing the best-managed and selected easy access location.”(Capasso, 2003)	Coordinated identification of all means of access at the new premises prior for organizational relocation arrangements so that it allow for directing, handling, reaching, placing, installation, maneuvering, shifting and move of people and furniture; minimizing physical barriers during the move.
19.	Identification and monitoring of safety measures during relocation	“packing guidelines”, “number of moving boxes”, “proper packing of chemicals and equipment” (Aguilar et al., 2013)	(Aguilar et al., 2013), developing a “from-to” list ensures proper move of packed items to the new premises.	All the acts toward monitoring and conduct of safety moves and relocation activities, handling of the assets circulation and protection of personnel and movers.

Table 10 - Preliminary identification of the factors affecting (relocation phase), factors: 17, 18 and 19.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
20.	Availability of quality management plan for the relocation process	“quality checks”(MARIS INTERIORS LLP, 2014), “quality of the goods and services produced”(Elena Patiño-Rodriguez & Jesus Guevara Carazas, 2019), “clear quality and experience specifications”(Jancey et al., 2016). “perceived quality” (Haapakangas, Hongisto, Varjo, & Lahtinen, 2018), “quality of construction” (TAQEEM, 2016), “improve the quality of planning, programming, design, construction and occupancy of the office workplace”, “improve quality and ensure value for money” (Hassanain, 2010b), “high quality premises would be good for the external image but” (Christeresson & Rothe, 2012b), , “Rich high quality finishes”(CBRE, Kinnarps, Mikomax Smart Office, Nowy Styl Group et al., 2014), “quality of space” (Rothe & Heywood, 2015)	According to (ASTM international, 2003) quality assurance (QA) as “all those planned or systematic actions necessary to provide adequate confidence that a material, product, system, or service will satisfy given needs”.	”all those planned or systematic actions necessary to provide adequate confidence that a material, product, system, or service will satisfy given needs” (ASTM international, 2003) ; all aligned with relocation scope, design and available standards.
21.	Minimization of relocation interruptions	“Sizing move phases”, “Developing a phasing plan“, “phasing moves per weekend”, “week-night moves may be less disruptive (and less expensive)” (Capasso, 2003), “physically moving”(Rothe, Heywood, et al., 2015b) “brief interruptions” (Cairns, 2003), “carried out without interruption” (Wu et al., 2006), ” engaging in the relocation process” (Lin et al., 2016), “minimize disruption to ongoing laboratory functions “(Aguilar et al., 2013), “distractions and interruptions”(Preiser, 2005), “phasing”(City of Somerville, 2019).	“dividing a relocation project into phases, a trade-off between the intensity of the disruption and the duration of the disruption. Stretching out a move into many phases has the advantage of reducing the workload per phase. As Moving in fewer phases shortens the duration of the disruption. The move can be phased by building/floor to be vacated. This allows a floor, building or wing of a building to be left completely vacated at one time. To conduct the transition without directly interfering tenants workload, vender interactions and customer needs” (Capasso, 2003)	Efforts made by relocation managers for the minimization of relocation impacts on employees, organizational business and external interactions of the organization as well as enabling conduct of relocation change as quickest as possible.

Table 11 - Preliminary identification of the factors affecting (relocation phase), factors: 20 and 21.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
22.	Selection of movers	“moving company”, “Selecting the right movers” (Capasso, 2003), “service procurement and managing sub-contractors” (Rothe, Heywood, et al., 2015b)	“A process for preparing a moving company and/or furniture installer request for proposal (RFP). a few basic steps to assessing mover capabilities, and the proposed move plan.” (Capasso, 2003)	The process of investigating and qualifying movers based on a prequalification practices and standards for the purpose of commissioning works proceedings to manage assets and personnel move to new premises, this may include managing employee’s related relocation arrangements; all according to budgeted funds for relocation within the specified planned time frame.
23.	Selection of suppliers	“Furniture consultant / provider” (MARIS INTERIORS LLP, 2014), “furniture installer”, “Assessing furniture installers” (Capasso, 2003), “service procurement and managing subcontractors” (Rothe, Heywood, et al., 2015b)	- “contractor, n—independent entity that agrees to furnish a certain number or quantity of goods, material, equipment, personnel, or services that meet or exceed stated requirements or specifications at a mutually agreed upon price and within a specified timeframe.” (ASTM International, 2015b)	- The process of investigating, qualifying and selecting materials, equipment, products suppliers based on a prequalification practices and standards for the purpose of purchasing, supply of assets and materials to new premises; all according to budgeted funds for relocation within the specified planned time frame.
24.	Selection of fit-out contractor	“building services and fit-out”, “quality and style of the fit-out”, “contemporary corporate fit-out”, “a new fit-out with the fit-out and decor reflecting the corporate identity” (Hills & Levy, 2014a), “fit-out costs” (Christersson & Rothe, 2012b), “fit-out of the building” (Baird & Penwell, 2012), “fit-out services” (Willett & Green, 1997).	- “prime contractor, n—contractor that has issued one or more subcontracts.” (ASTM International, 2015b) - “contractor, n—independent entity that agrees to furnish a certain number or quantity of goods, material, equipment, personnel, or services that meet or exceed stated requirements or specifications at a mutually agreed upon price and within a specified timeframe.” (ASTM International, 2015b) - “subcontractor, n—contractor that has engaged in a contract to perform a whole or a part of another contractor’s original contract.” (ASTM International, 2015b)	- The process of investigating, qualifying and selecting fit-out contractors based on a prequalification practices and standards for the purpose of making organizational new premises interior spaces suitable of occupation prior to the move; all according to budgeted funds for relocation within the specified planned time frame.

Table 12 - Preliminary identification of the factors affecting (relocation phase), factors: 22, 23 and 24.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
25.	Time control & management of the relocation	The project programme”, “Obtaining approvals is a critical component in the delivery of any workplace. Cost and time overruns can be easy to incur unless strong coordination and communication with approving parties is established early in the workplace optimization process.”(MARIS INTERIORS LLP, 2014), “The construction schedule”, “schedule progress “ (Capasso, 2003)	- “timely manner, n—within an agreement, the action to be taken by a specified date, or within a given or reasonable time frame. What is reasonable is determined by the decision making needs of the owner, the contracting parties, or other interested parties” (ASTM International, 2015b) - “control signal, n—in construction, any series of data points which indicates deviation from the expected job progress in relation to labor, material, or finance, and indicates anomalies on the jobsite to the contractor, project manager, or job supervisor; for example a control signal identifies any deviation from the labor productivity reference point”(ASTM International, 2014) “The project programme is an essential tool in the workplace optimization process, controlling and monitoring progress through all stages of the project”(MARIS INTERIORS LLP, 2014) - “reality’ version of the construction timetable, the timetable communicated may differ from what the construction team believes is achievable”(Capasso, 2003)	- The process of controlling relocation progress as scheduled, according to specified dates (milestones) through all stages of the project and signaling any deviations from what was initially set.
26.	Cost control & management of the relocation process	“control property costs”(Raewyn, 2014)	- “cost overruns, n—in project design or construction, or both, the unanticipated increase in cost due to factors such as unanticipated site conditions, changes in the cost of building materials, labor, weather, and labor disputes.”(ASTM International, 2014) - “cost model, n—the description of the project divided into discrete elements showing quantities and unit price for each element.”(ASTM International, 2014) - “cost limitations, n—the budget boundaries for project elements.”(ASTM International, 2014)	- The process of controlling relocation cost performance as budgeted, according to specified cost limits through all stages of the project and signaling any deviations from what was initially set.

Table 13 - Preliminary identification of the factors affecting (relocation phase), factors: 25 and 26.

2.7 PRELIMINARY IDENTIFICATION OF THE FACTORS AFFECTING (POST-RELOCATION PHASE) OF ORGANIZATIONAL WORKPLACE RELOCATION

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
27.	Availability & adequacy of post relocation checklists	“evaluate how well moves are performed.”(Hebert, 2012), “checklist”(Lovell, 2011), “Checklist” (Stokols & Scharf, 2009)	- “functionality, adj—of a building, being suitable for a particular use or function”(ASTM International, 2013a) - “rating process, n—the process of determining the serviceability of a facility for a specified purpose.” (ASTM International, 2013a) - “aspect, n—of functionality, a broad component of serviceability, comprising several related topics of functionality.” (ASTM International, 2013a) - “feature, n—of a facility, a physical element of a building, building component, building subsystem, unit of furnishing or equipment, or of a location, or of an aspect of design, arrangement, form, or color, which helps or hinders the satisfaction of a requirement for functionality.” (ASTM International, 2013a) - “knowledgeable person, n—an individual who has technical knowledge concerning the building or facility, for example, about occupant requirements, building design, mechanical systems, operation, and maintenance.” (ASTM International, 2013a)	- Listing of relocation key targeted objectives of workplace features, aspects to ensure readability, to test and verify space functionality after moving to the new premises by a knowledgeable person.
28.	compliance of suppliers/ movers/ installers / contractors to relocation plan	“Communicate Findings” (ASTM International, 2013a) “snagging list”(office principles, 2015)	- “fine-tuning the new workplace and its workplace practices”(Rothe, Heywood, et al., 2015b)	- Compliance is state of acting in conformance with the predefined and agreed design, rules , guidelines and requirements prior for conduct of relocation to new premises.
29.	Satisfactory outputs of MEP systems’ commissioning	“Commissioning engineers utilized by landlords to vet and approve the completed project “(MARIS INTERIORS LLP, 2014)	- “surveillance and maintenance, n—activities such as monitoring, inspection, maintenance, replacement and repair of components and parts that are required for a site or a facility prior to remediation.”(ASTM International, 2014) - “commissioning is used to ensure that the building fulfils the owner’s requirements. The commissioning process focusses on securing technical requirements through all project phases, instead of the traditional method of only focusing on performance related perspectives such as scheduling and budgeting.(Larsen, Lindhard, Brunoe, & Jensen, 2018)	- All considerations ensuring that the MEP systems at the new premises are fulfilling organizational requirements while ensuring achievement of operational outputs, technical requirements according to design and relocation plan specifications.

Table 14 - Preliminary identification of the factors affecting (post-relocation phase), factors: 27, 28 and 29.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
30	Availability of maintenance plans	“Without defining this policy, maintenance operation processes will be in a haphazard order.”(Lee & Scott, 2009), “Operation and Maintenance (O&M) Manuals”(MARIS INTERIORS LLP, 2014)	- “maintenance, n—act of keeping fixed assets in an acceptable condition capable of performing intended function.”(ASTM International, 2014) - “Building maintenance policy is a written document and provides a management framework to the maintenance personnel to determine appropriate maintenance strategy and standard. Building maintenance policy and strategy is one of the main aspects in management of building maintenance operation processes” (Lee & Scott, 2009)	- A written document that provides a management framework to the maintenance personnel in order to determine an appropriate maintenance strategy and standard that allows operation of the facility and continuity of occupation.
31.	Availability of workplace health and safety plan	“Emergency light test / survey to ensure emergency lighting systems are operational and configured for safe egress in event of emergency”, “Fire evacuation procedures to establish the limiting factor of the client’s occupation”, Health and Safety information“ (MARIS INTERIORS LLP, 2014), Provision of “emergency preparedness procedures and evacuation route” (Capasso, 2003), “work health and safety arrangement” (Comcare, 2016), “safety and work processes” (Lin et al., 2016)	- (Comcare, 2016) defined (WHS) workplace health and safety planning as the act of “providing a workplace that enables all work activities to be carried out safely” considering “all reasonably practicable measures to eliminate or minimize risks to the health, safety and welfare of workers, contractors, visitors, and anyone else who may be affected by our operations”. - (WSCC, 2016) defined (WHS) workplace health and safety plan as a document of procedures and policies at workplace where it communicates organizational commitment to the health and safety of the workplace while ensuring that the practiced processes are keeping workers safe; while ensuring that the organization and staff are both aware of their health and safety responsibilities respectively.	- Planning a workplace guidelines, processes and practices for the purpose of achieving a healthy and safe workplace environment by ensuring that health and safety responsibilities at the organizational workplace are well communicated, committed and delivered; while raising legislative liabilities awareness according to best available standards.
32.	Availability of orientation plans for the new premises	“the move manual”, “communication, communication, communication”, “relocation newsletter, organization-wide briefing, departmental staff meetings, moving fair, organized site visits, welcome packet”, “workplace guidelines or procedures”, “welcome letter from senior management”, “communicating with landlords”, “communicating with customers and business partners” (Capasso, 2003), “informing and involving the users” (Hiltz, 1999)	- “guideline, n—a written statement or outline of policy, practice, or conduct.”(American Society for Testing and Materials, 1998) - The “manual should incorporate information regarding the office space programme, floor plans, furniture standards, move coordinator list, phasing plan, move vendor list, new building fact sheet, employee amenities, security procedures, move team notes and general announcements; a compilation of information.”(Capasso, 2003).	- Orientation plan includes all activities conducted for the purpose of informing occupants about the new premises, distributing a manual, utilizing a communication technique which incorporates information regarding the office space programme, floor plans, furniture standards, move coordinator list, phasing plan, move vendor contacts list, new building fact sheet, employee amenities, security procedures, move team notes and general announcements; a compilation of information for the purpose of orienting occupants about the new premises of the organization.

Table 15 - Preliminary identification of the factors affecting (post-relocation phase), factors: 30, 31 and 32.

Factor ID	Factor	Terminologies	Definitions from Literature	Formulated Definition
33.	Occupants satisfaction with new workplace premises	“assessing employees ratings of facility performance”, “survey for ratings of environmental features”, “checklist of work-related experiences” (Stokols & Scharf, 2009), “acoustic survey to satisfy building control in assessing ambient noise levels and the impact of potential new external plant should this equipment be positioned outside of the allocated plant enclosure for the property”(MARIS INTERIORS LLP, 2014), “post-move feedback”, “satisfaction survey” (Capasso, 2003)	- “facility performance evaluation, namely, the assessment of employees' ratings of environmental conditions within their offices and the actual and perceived impacts of those conditions on personal productivity and well-being.” (Stokols & Scharf, 2009)	- All tasks, activities of rating, recording, measuring, collecting and understanding new premises occupant's satisfaction and feedback about their new premises while ensuring correctively the improvement of their satisfaction toward the workplace.
34.	Availability of record keeping procedures	“Communicate Findings” (ASTM International, 2013a), “Chronicling the move” (Capasso, 2003), “records”, “Records keeping”, “electronic or hardcopy”, “keep accurate records” (University of Houston - Facilities Management dept., 2012)	- (University of Houston - Facilities Management dept., 2012) defined record keeping procedures as “to keep accurate records of projects to serve as a historical record for its real estate and for auditing purposes. These records serve as evidence of the decisions/approvals made throughout the project as well as serving as a benchmark for future projects. All documentation should be filed in a way to allow for quick and easy access by all employees and supervisors of FM”.	- All record keeping procedures either recorded electronically or in a hardcopy format which serve as a historical record for new premises property proceedings and for auditing purposes as well as a reference for future prospects of organizational facilities.

Table 16 - Preliminary identification of the factors affecting (post-relocation phase), factors: 33 and 34.

2.8 DISCUSSION

The review of literature related to relocation was presented in this chapter; in order to identify the organizational definition, the relocation as an emerging topic. The readings of literature were intended to formulate an understanding the drivers, risks, accountabilities, involvement of employees and organizational individuals at times of organizational workplace relocation.

The relocation is found to be a genuine topic that has been discussed in literature but with no previous focus on a generic framework that provides a systematic process for the organizational relocation over its phases namely: pre-relocation phase, relocation and post-relocation. There are several aspects to consider while relocating to new premises the most discussed in literature were: employees' involvement, workplace strategies and adoption of alternative workplace as a flexible solution to organizations. Furtherly, previous studies were taken into consideration to formulate an understanding of relocation underlying activities; qualitative approaches to preliminary identify the factors affecting the process of organizational relocation. Hence, thirty-four factors were identified from several terminologies in literatures that provide a sense of consensus upon their importance. The factors identified are refinement of initial eighty-eight factors that has been grouped to create a more distinctive and considerable factors that affect the organizational relocation process. This refinement involved a meetup discussion with three relocation project managers to discuss their relativeness and completeness. The next chapter will identify each factor based on literature readings and their challenging impacts on the organizational workplace relocation process.

CHAPTER 3

FACTORS AFFECTING THE ORGANIZATIONAL WORKPLACE RELOCATION PROCESS

There has been relatively a gap in published literature on the topic of organizational workplace relocation over the three phases of its lifecycle; namely: (pre-relocation, relocation and post-relocation). Most of the studies were focused on different set of factors that influence organizational workplace relocation but does not follow the proposed phasing arrangement. Pellenbarg *et al.* (2002) defined relocation as the organizational decision to move from a workplace at location (A) to location (B).

This view is supported by (Christersson & Rothe, 2012a), which argued that relocation in literature is mostly focused on “*location, site selection rather than the processes and services necessary to successfully complete that process*”. While on the other hand, Christersson & Rothe (2012a) stated that “*the relocation process is not a one-decision process that culminates in the final selection of one location*” but “*a complicated processes managed thoroughly and dependent on organizational levels of sophistication and possesses several risks involving several actors, stakeholders, phases and decisions*”. Thus, this research investigates literature to extract factors affecting organizational relocation to serve each phase. To begin with the literature review of factors, this research asserts literature findings for the factors affecting the pre-relocation phase, relocation phase and the post-relocation phase.

3.1 FACTORS RELATED TO THE PRE-RELOCATION PHASE

3.1.1. Analysis of business needs for relocation

According to Rothe *et al.* (2014) the initiation of relocation decision starts by identifying business needs over a projected span of time. Several terms were used to express this factor in literature, namely: identification of organizational business reasons, needs and requirements (Williams & Harris, 1988; Ingrey-Counter & Biles, 1994; Baccarini & Bateup, 2008; Hassanain, 2010b; Rothe *et al.*, 2014; Rothe, Heywood, *et al.*, 2015b). Allard & Barbar (2003) discussed and found that executives are in continuous need to relocate and re-design workplace to perform an aimed business strategy; by choosing newer locations that would enable market access and enhance competitiveness. In fact, expansion of business, or reduction and cutting of business costs, usually intent for better provision of service, or by the need to increase corporate wealth by generating income from unoccupied spaces and unutilized properties. while seeking advantageous locations that would enhance staff recruitment, lower wages and improve customers access by migration of workplace and changes in business capacity (e.g. growth and downsizing) (Williams & Harris, 1988; Pellenbarg *et al.*, 2002; Mazzarol & Choo, 2003; Nunnington & Haynes, 2011; City of Somerville, 2019); all could be considered as drivers for an organizational workplace relocation decision.

According to (Adnan *et al.*, 2009; Roper *et al.*, 2009; Bull & Brown, 2012) that economic climate, the need to improve organizations ability to plan and react to changing characteristics of business service and the need to meet the growing demand for businesses mobility (Carrincazeaux & Coris, 2015; Rothe, Heywood, *et al.*, 2015a) justifying change

in location, to improve business performance. While meeting its objectives and forecasting the workplace future needs (Lin *et al.*, 2016; T. J. M. van der Voordt & Jensen, 2018). While eliminating the need to expend capital funds to renovate and modernize the workplace (City of Somerville, 2019). These are all considerably internal and external challenges, which may influence relocation decisions to office facilities, spaces at targeted business locations.

To sum up, the analysis of business needs must entail a bottom line of identifying all the business vital information, leading organizational decision makers, to take an effectively informed workplace relocation decisions (Aguilar *et al.*, 2013).

3.1.2. Organizational culture and image requirements

Organizational culture is an “*interchangeably set of characteristics that characterize a company’s prevailing values, attitudes, beliefs, artifacts and behaviors that contribute to its sense of order, continuity and commitment*” (Cole *et al.*, 2014); workplace culture, emerge from a distinct context to another (*e.g.* between government, private sector organizations and academic workplace settings).

Ingrey-Counter & Biles (1994), Morgan & Anthony (2008) , Adnan *et al.* (2009), Hassanain (2010b), Christersson & Rothe (2012a) and Cole *et al.* (2014) discussed that adapting change in workplace to organizational culture is a considerable factor that impacts talent retention, attraction, connectivity and internal communication between staff and external behaviors of service provision at the workplace. Morgan & Anthony (2008) and Roper *et al.* (2009) agreed that understanding organizational culture is an essential requirement to effectively and successfully plan for organizational facilities; by shaping

information and gathering organizational norms and its modes of facilities distribution for provision of service.

Hills & Levy (2014) defined organizational image as forms of perceived and interpreted organizational identity, which is imposing a norm of uniformity of organizational workplace appearance. It is the loose structure of knowledge and beliefs about an organization; the “*net cognitive reactions and associations of customers, investors, employees, and applicants to an organization’s name*” (Lievens, 2017). Morgan & Anthony (2008), Hassanain (2010b), A. Davis (2015) and Lin *et al.* (2016) highlighted that workplace relocations opportune improvement in organizational culture and image, which can reposition how an organization is being observed in the market, how workplace image attracts business customers, and retain talents. Bull & Brown (2012) stated that culture and image, can be drivers for an organizational workplace relocation decision, especially when an organization performs poorly. Furtherly, it can be a challenging consideration, when markets become very competitive; as organizations seek to be distinguished in front of its competitors (Lievens, 2017). Christersson & Rothe (2012a) and City of Somerville (2019) indicated that change in culture and image by transforming workplace into a different spatial strategy at the new premises, targets a better provision of organizational service; it is considered as an actual driver for relocation decisions.

3.1.3. Condition of existing facilities and assets

Organizations have a continuous demand for modern and functional assets due to ageing, performance loss and obsolescence (Roper et al., 2009; Straub, 2009). In times of relocation the decision could be derived from poor conditions of assets and workplace

facilities. Assessment of movable assets to identify which can be salvaged and used in the new space is a necessary consideration in times of relocation (Capasso, 2003; Lützkendorf *et al.*, 2005; Preiser & Vischer, 2008; Roper *et al.*, 2009; Christersson & Rothe, 2012a; Wahida *et al.*, 2012; City of Somerville, 2019). The availability of assessment procedures for organizational assets, plays a vital role, in times of relocation; by identifying cost saving initiatives, understanding organizational tangible and intangible needs of assets, and challenges facing its assets capabilities to perform as required and assists in appraising supplying new assets decisions, while mitigating business disruptions and elongation in acquirement of new premises, due to supply lead times of new assets and installation (Capasso, 2003; Roper *et al.*, 2009; Hassanain, 2010b; Christersson & Rothe, 2012a). Seeking better ergonomics could be a driver for acquiring new furniture, new IT equipment and infrastructure at new premises, which can effectively improve knowledge workers productivity and enhance their perception toward the workplace, satisfaction and wellbeing (Capasso, 2003; Christersson & Rothe, 2012a; El-Zeiny, 2012; Wahida *et al.*, 2012).

It is challenging at times of relocation to evaluate assets without a procedure, a procedure that eliminate potential subjective bias occurring from the asset evaluator perception (Straub, 2009).

Categorizing organizational assets, dividing and listing of building components into systems, fittings and furniture, conducting assets site-inspections accordingly, scaling inspected data based on evaluation mechanisms; are all acts leading to informed measure of severities of assets while questioning it's worth rescuing, keeping rather discarding or replacing enhance the effective reporting of salvageable assets (Wahida *et al.*, 2012).

3.1.4. Employees needs

Employees wellbeing, satisfaction, safety, sense of autonomy, comfort, aspirations, management of space, social and psychological attachment to old location and attitude toward change of workplace location all play a critical role in times of relocation and occupancy at the new premises (Hiltz, 1999; Lützkendorf *et al.*, 2005; Adnan *et al.*, 2009; Elzbieta *et al.*, 2011; Claire *et al.*, 2016; Candido *et al.*, 2019; Islam *et al.*, 2019). As people evaluate their environment in terms of needs the relocation to new premises can be a challenging decision for organizations (Hiltz, 1999). Knowledge workers are critical to organizational success as they utilize their skills to create, distribute and apply acts that improve organizational service provision (Hills & Levy, 2014a). As conditions offered, by workplace facilities, supporting different human activity is a driver for knowledge workers ability to identify themselves, improve creativity and intelligence within organizational workplace facilities (Elzbieta *et al.*, 2011; Candido *et al.*, 2019). Thus, interviewing and involving employees at times of relocation enhance the relocation experience (Rothe *et al.*, 2014; City of Somerville, 2019). Kegel (2018) highlighted that employee's unwillingness to relocate can be challenge for organizations relocating their workplace to retain talent. The emotional stress that may be caused by relocation should be investigated with a provision of a solution, to improve staff turnover, by effective communication of relocation benefits (Lin *et al.*, 2016). Thus, organizations should collect data from employee's perspective (about emerging social, economic, political, population, environmental, and crime trends) to ensure that relocation doesn't affect their life conformability with the relocation decision.

3.1.5. Functional workplace needs

According to ASTM International (2013b), the word functional is an adjective that originates from performing or ability to perform a regular function. It usually implies a product, or a facility that is “*designed or developed chiefly from the point view of use; being suitable for a particular use or function*”. Departmental interdependency, functionalities of use fitting different types of work tasks, organization, adjacency and physical arrangement of spaces within workplace facility, analyses of workflow, circulation, churns, promoting collaboration, conferencing, space restacking and optimization, are all relocation considerations that affect the functionality, ways of work and synergy at the new workplace premises (Capasso, 2003; Lützkendorf et al., 2005; Preiser & Vischer, 2008; Adnan et al., 2009; Roper et al., 2009; Straub, 2009; Kaarlela-Tuomaala et al., 2009; Hassanain, 2010b; Elzbieta et al., 2011; Safian et al., 2011; Christersson & Rothe, 2012a; Aguilar et al., 2013; Ashraf M. Salama, 2013; CBRE et al., 2014; Hills & Levy, 2014a; Schuster, 2014; Lahtinen et al., 2015; Claire et al., 2016; Wineman & Barnes, 2018 ; City of Somerville, 2019). The functionality of workplace enables organizational stakeholders to communicate and connect more effectively while assure that business provision is running smoothly to serve its strategy, goals and objectives (Hassanain, 2010b; Safian et al., 2011). New facility plans must follow a detailed analysis aided by data collected from all units in the organization; this act assists in identifying functional work prospects between current and future (Roper et al., 2009).

Given that “*work is considered as something that workers do, not a place to which they go*” by Candido et al. (2019), it turns out to be more noticeable for work spaces to be

more of functional configuration rather of traditional; failing to do so in the new premises may lead to a continuously challenging space needs (higher churns).

3.1.6. Technical workplace needs

Emerging needs for technological solutions for knowledge workers at workplaces have been considered as a luxury and purely economic. Recently, with the advancement of telecommunications, mobility and intelligence necessitated technical needs and requirements at workplace to cope with the fourth industrial revolution (Kopp *et al.*, 2016; Elzbieta *et al.*, 2011). Millhiser (2019) stated that “*Technology has the ability to make or break every organization*”. The need for efficient use of building technologies, innovation, modernity, novelties and accommodation of information technologies are all challenges that face organizational existing workplaces that may lead to relocation decisions (Capasso, 2003; Lützkendorf *et al.*, 2005; Adnan *et al.*, 2009, Elzbieta *et al.*, 2011; Safian *et al.*, 2011; Rothe *et al.*, 2014; Cole *et al.*, 2014; Hills & Levy, 2014a; City of Somerville, 2019). Hassanain (2010b) discussed technical needs of workplace, as an improved understanding and articulation of workspaces and facilities in order to improve efficiency and productivity by acquiring ergonomic, technological products and solutions that fit human dimensions and respond to functional requirements of the organizational workplace. Today, offices as a service (OaaS) changed the shape of workplace. Many corporates are moving into coworking spaces because businesses became more mobile, service and technological systems oriented; services such as IP solutions (e.g. telephony, TV, addressing, AV, security, safety), conferencing rooms, shared desks, cabling readability, ultra-speed access to internet, while eliminating the need for extensive organizational capital investments on facilities (Nicola *et al.*, 2017).

Technical considerations are not limited to technological advancements, but also cover the need to provide a comfy, safe and healthy workplace indoor environment. This can be achieved by specifying quality fabrics, finishes, fittings and furniture, minimizing noise, enhancing use of daylight while reducing heat gain by proper selection of fenestration materials, managing and monitoring energy consumption, reducing fire hazards, elimination of contaminants by control of gasses, heat and moisture (Hassanain, 2010b).

3.1.7. Location of the new premises

Location has been the most discussed factor in literature driving organizational relocation decisions. “*Location, location, location*” (Nitsch, 2006; Rothe & Heywood, 2015). The consideration of a workplace location vary for each organization, some organizations seek better access to market, better reach of highly caliber talent, lower wages, better customer access, availability of public transports, better business environment, lower crime rates, proximity to central business districts, better views, better accessibility from the exterior, location size and capacity, quietness of surroundings, prestige, attractive street settings, the need to centralize and decentralize and proximity to residential densities (Williams & Harris, 1988; Mazzarol & Choo, 2003; Lützkendorf *et al.*, 2005; Adnan *et al.*, 2009, 2015; Hills & Levy, 2014a; Claire *et al.*, 2016; Kopczewska & Lewandowska, 2018; Balbontin *et al.*, 2019; Candido *et al.*, 2019). Also, the relocation decision may just emerge from a poorly located existing premises or a need to move to a desired location (City of Somerville, 2019; Facilities department, 2019).

Selection of new location has to go under assessment of highest and best use of workplace facility to ensure that the selected new location is consolidated to fit organizational strategy and size (Roper *et al.*, 2009). Location is usually addressed based on attributes that are geocoded to serve organizational goals (Christersson & Culley, 2018; Kopczewska *et al.*, 2018). Furtherly, location define how workplace facility is performing by efficient use of views and daylights resulting an improved satisfaction and attraction of occupants, moreover, altering the way they commute (Shortland, 1987; Nitsch, 2006; Jeffrey Hill *et al.*, 2008; Elzbieta *et al.*, 2011). Provision of highly technological infrastructure at specific locations may drive organizations to make relocation decisions (Goddard & Pye, 1977).

3.1.8. Proximity aspects to amenities

Availability of parking spaces that fit the capacity of staff and external visitors can be a driving factor for an organizational short-distance relocation decision (Adnan *et al.*, 2009, 2015; Lützkendorf *et al.*, 2005; Nitsch, 2006; Safian *et al.*, 2011; City of Somerville, 2019). Similarly, proximity to other amenities such as: banks, postal, retail, gym, health clubs, restaurants cafes, availability of pantries, distance to ports and terminals (*e.g.* airports, seaports, train stations) and distance to communal facilities, other organizational facilities, waterbodies and faster walkable connections and access to main streets and highways (Mazzarol & Choo, 2003; Lützkendorf *et al.*, 2005; Adnan *et al.*, 2009; Kopczewska *et al.*, 2018; Nitsch, 2006; Safian *et al.*, 2011). Kopczewska & Lewandowska (2018) defined proximity aspects as relative location which is the “*a function of distance to e.g. public transport network, which captures spatial characteristics of a city and plays the role of proxy for connectivity*”; considered to improve staff reachability, leisure, retain

talent and improve their locational attachment to workplace (Adnan *et al.*, 2009; Safian *et al.*, 2011).

3.1.9. Assessment of skeletal characteristics of the new premises

Selection of the new workplace facility must entail assessment of skeletal characteristics of new premises. Considerations such as the location of building core, access and circulation layouts, floor plate shape, size and layout, number of storeys, age of the structure, floor acceptable loads, building envelope, ceiling height, width of corridors, internal distances and dimensions, structural integrity, roof integrity to withstand extreme weather conditions and arrangement of columns (Adnan *et al.*, 2009; Arge, 2005; Hassanain, 2006; Nitsch, 2006; Safian *et al.*, 2011; Best *et al.*, 2011; Hills & Levy, 2014a; Facilities department, 2019; Islam *et al.*, 2019). All which can be challenging for space planning and organization; they may limit the aimed level of workplace serviceability (ASTM International, 2013a) and impact the building flexibility to meet internal changes in space arrangement. Furtherly, it can “*reduce the number of possible options for configurations of the layout*” (Søiland & Hansen, 2019).

Islam *et al.* (2019) concluded that the structural components have the potential to develop defects such as: “*cracks in construction joints at beam–wall joints, concrete–brick joints, and wall– ceiling joints*” highlighting that it’s the role of the assessor to indicate such defects to eliminate excessive maintenance costs that may occur in future occupation of the facility. Adnan *et al.* (2009) discussed that structural orientation of the building impacts its ability to optimally utilize its exterior views and utilization of daylight at the workplace.

3.1.10. Assessment of building services and systems characteristics of the new premises

The assessment of building services and systems is a critical factor that is affecting selection of new premises, and it is necessary as a supporting tool for evaluation of the workplace relocation optioned premises. Evaluating the availability & adequacy of plumbing, sewage and water supply networks, distribution of efficient power sources, availability of backup power sources, appropriateness of fire alarms, provision of an energy efficient and functional HVAC systems, adequacy of communication cabling and systems, suitability of speed elevators, chilled water networks, availability of building management and control system, adequacy number of toilets and sanitary fixtures, adequacy of lighting, adequacy of electrical systems and availability of IT services (Adnan *et al.*, 2009, 2015; Wu, 2010; Elzbieta *et al.*, 2011; Safian *et al.*, 2011; ASTM, 2012; Lützkendorf *et al.*, 2005; Claire *et al.*, 2016; Islam *et al.*, 2019) are all acts and considerations which impact tenants satisfaction and ensure facility performance, reliability and capability to perform the aimed organizational functions over its targeted span of service life at the new premises (Wu *et al.*, 2006; Sicola, 2017; ASTM , 2018; Islam *et al.*, 2019; Wu, 2010;). Actually, the improved control over building systems improves environmental conditions and productivity of the staff at the new premises (Candido *et al.*, 2019).

3.1.11. Flexibility and adaptability at the new premises

Arge (2005) defined flexibility as “*the ability of a building to meet changing functional user or owner needs by changing its properties easily*” and differentiated it from elasticity which is “*the ability of a building to be extended or partitioned related to*

changing user or owner needs” furtherly defined generality as the “*ability of a building to meet changing functional user or owner needs without changing its properties*”; considering all will improve the adaptability of a workplace.

Van der Voordt (2004) described flexible work environments as “*more democratic than traditional offices*”. Jeffrey Hill *et al.* (2008) defined workplace flexibility as “*the degree to which workers are able to make choices to arrange core aspects of their professional lives, particularly regarding where, when, and for how long work is performed*”. Søliland & Hansen (2019) discussed that “*organizations are increasingly adopting flexible office concepts that include practices such as clean desk, shared desk, distributed work etc.*”. Where, Smith *et al.* (2019) argued that “*Larger organizations may have the resources to implement flexibility policies more easily than smaller organizations*”. Hills & Levy (2014) discussed that flexible work arrangements are found to be the most interactive for highest variety of tasks but the most tolerant to distractions and noise.

Adnan *et al.* (2009) related workplace flexibility to the ability to change in technology: through the availability of raised floors, availability and convenient power and data outlets, networking cables and access points, sophisticated control over air cooling, quality and lighting; all are considered to impact users satisfaction and ease of change in workplace arrangements at the new premises.

3.1.12. Sustainability measures at the new premises

Lützkendorf *et al.* (2005) described environmental performance as “*the aspects which describe and assesses the building’s features and characteristics relevant to its*

impact on the environment". Abdelfattah (2018) defined sustainability as *"the development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*. Furtherly, Abdelfattah (2018) described green building as *"known as a sustainable or high performance building, the practice of increasing the efficiency with which buildings and their sites use energy, water, and materials; and reducing building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal the complete building life cycle"*.

Abdelfattah (2018) highlighted that *"the practice of creating structures and using processes that is environmentally responsible and resource-efficient throughout a building's life-cycle from siting to design, construction, operation, maintenance, renovation and deconstruction. This practice expands and complements the building design concerns of economy, utility, durability, and comfort"*. Utilization of technology is important in terms of sustainability, but it is not a solution in its own right; *"approaches to building orientation, form and construction"* are more critical aspects of sustainability (Sharpe, 2013).

On the contrary, Rehm & Ade (2013) investigated the obstacles to building green such as *"higher construction costs"* and argued that green buildings *"soft costs are higher than conventional projects due to incremental costs associated with the process of achieving a green building rating"*. This involves both *"application costs as well as additional consulting required under the various rating tools"*; given that 86% of 631 survey respondents believed that green buildings cost more than traditional buildings.

Using and selecting energy efficient lamps and fittings, setting appropriate level of lighting, adequate zoning of HVAC use and control over its operation and ensuring insulation of fenestrations are all sustainable acts and green considerations that must be evaluated for a better energy conservation at the new premises (Hassanain, 2010a). since *“Saudi Arabia is trying to position itself to make use of the emerging sustainability trends in the building sector”* (Asif, 2016). Hence, it’s becoming a considerable factor that formulates selection of the new premises of workplaces.

3.1.13. Operation and maintenance requirements at the new premises

Lee & Scott (2009) defined maintenance as *“work undertaken in order to restore every facility, that is, in every part of site or building to an acceptable standard”*. In other words, *“all works undertaken in order to keep, restore or improve every part of a building, its services and surrounds, to a currently acceptable standard, and to sustain the utility and value of the building”*. Where Islam *et al.* (2019) defined building performance as the *“behavior of a product in use”*.

Claire *et al.* (2016) point of view on building’s operation performance can be defined as *“the way a building supports occupiers’ differing aims and needs, including driving quality and value, meeting sustainability objectives and providing environments that meet the needs of users, resulting in efficient and effective workplaces”*. Thus, *“organizations with limited or even inadequate maintenance resources encounter difficulties for bringing a building facility to original standard, but just meeting with statutory requirements”*; this doesn’t only impact organizational image but also *“minimizes its business environment competitive strength”* (Lee & Scott, 2009). While, managing

maintenance activities results in “*savings for the organization*” as Elena *et al.* (2019) discussed, thus it became an important factor driving relocation decision and a critical consideration for the adequate selection and design of the new premises.

Thus, in times of relocation, the Improved operation and maintenance, waste management, cleaning and housekeeping, security, reducing operation costs are all becoming a top priority for improving workers comfort and satisfaction at the modern workplaces and facilities (Adnan *et al.*, 2009, 2015; Wijerathne *et al.*, 2012; Claire *et al.*, 2016; City of Somerville, 2019; Islam *et al.*, 2019).

3.1.14. Development of a relocation plan and schedule

Willett & Green (1997) stated that “*A successful relocation, refit or churn is dependent on creating and adhering to a workable schedule*”. Appropriate and efficient phasing of relocation and move activities, documentation of relocation objectives, stakeholders, establishing a time schedule for implementation of relocation and sizing the moves are all considerations and acts needed to ensure the order of activities prior for the implementation of relocation (Hiltz, 1999; Capasso, 2003; Christersson & Rothe, 2012a; Aguilar *et al.*, 2013; Rothe *et al.*, 2014; City of Somerville, 2019; Facilities department, 2019). Especially for multi phased and multi-site moves a coordinated schedule should enlist in detail the timings for movement of organizational assets and personnel to ensure their successful and satisfactory transition to new premises (Kelley & Walker, 1959; Willett & Green, 1997; Preiser & Vischer, 2008; Ciaramella & Dettwiler, 2011; Aguilar *et al.*, 2013; Lin *et al.*, 2016)

Willett & Green (1997) stated that, a comprehensive scheduling “*will normally involve most or all of the following stages: creating a project plan and programme, approving and controlling a budget, drawing up a schedule of: move works, producing block and space plans, obtaining statutory approvals, implementation of works*” while “*setting up detailed critical path plans*”. ASTM (2013b) defined the term plan as a “*document describing services to be provided to the design consultant (architect, engineer, or interior designer) for a facility, in detail sufficient for the design to proceed; Including general project information specifically related to the project, such as time plan; and technical design data*”.

According to ISO (2018) planning is “*to establish the objectives and processes necessary to deliver results in accordance with*” organizational requirements and policies. This is a critical consideration that must be done in order to plan ahead the relocation project activities; team responsibilities, team chart, scope, plan, qualifications selection criterion, coordinating organizational requirements with projects’ submittals and budget cycles (Aguilar *et al.*, 2013). Actually, organizations “*client and stakeholders are often reluctant to take the time to think about future needs*”, while “*focus on immediate deadlines or immediate problems that need to be solved*” impacts the final outcome of the new premises (Preiser & Vischer, 2008).

3.1.15. Formation of divisions’ move teams and identification of relocation stakeholders

Mazzarol & Choo (2003) defined participants of relocation decision as “*actors who may have an impact on business location decision*”. In times of relocation, some

organizations seek to have relocation consultant assistant whose task is to “*intermediary assist with location studies, financial analyses, negotiation of contractual details of lease and purchase agreements, assist with the logistic and financial aspects of employee and facility relocation, provide information concerning economic base of real estate factors in potential locations and make recommendations for new locations*”. The selection and involvement of internal and external organizational stakeholders in relocation decision and implementation is necessary to ensure assignment of responsibilities and enhancement of the relocation processes and activities (Lin *et al.*, 2016). Similarly, Rothe *et al.* (2014) discussed that the inadequate selection and lack of a managerial authority in times of relocation can be a challenging approach.

Roper *et al.* (2009) and Aguilar *et al.* (2013) discussed that stakeholders define projects expectations and inspire staff effective engagement through relocation lifecycle; as they ensure that the new project is coordinated, planned and executed. They should attain an adequate level of technical skill to hold responsibilities such as (overseeing, orchestrating and coordinating the relocation project activities along with business commitments). Appointing a technical manager ensures official response to all issues related to relocation and facilitates the effective exchange of functional workplace requirements to the new premises’ designers. Usually a committee of organizational executives, departmental managers, financial analysts, human resources manager and lawyers is formed to make the relocation decision and manage its succeeding responsibilities (Balbontin & Hensher, 2019).

3.1.16. Allocated budget for relocation

According to ASTM (2013b), a cost project brief is defined as a “*document describing services to be provided by the design consultant (architect, engineer, or interior designer) for a facility, in detail sufficient for the design to proceed; Including general project information specifically related to the project, such as cost plan; and technical design data*”. Thus, allocating a budget for the relocation project constraints the relocation selections and decision making, indicates organizational ability to acquire sophisticated workplace solutions and ensures efficient resources planning of its implementation (Roper *et al.*, 2009). The budget must be analyzed not assumed and originate from organizational ability to conduct capital investments. The budget become a challenging consideration especially in times of mergers, acquisitions and analyzing buy/build/expand and own versus lease decisions for the new workplace facilities (Hiltz, 1999; Capasso, 2003; Lützkendorf *et al.*, 2005; Roper *et al.*, 2009; City of Somerville, 2019; Facilities department, 2019).

3.2 FACTORS RELATED TO THE RELOCATION PHASE

3.2.1. Availability of accurate, coordinated and complete relocation documents

ASTM (2013b) defines facility project brief (statement of works) as a “*document describing services to be provided by the design consultant (architect, engineer, or interior designer) for a facility, in detail sufficient for the design to proceed; Including general project information specifically related to the project, such as functional, technical, and design requirements; time plan; cost plan; and technical design data*”. The completeness of relocation documents such as: workplace design, systems design, site layout and completeness of checklists and forms needed to decide, implement and assess the move is an important tool that ensures a high quality and well-studied relocation (Capasso, 2003; Roper *et al.*, 2009; MARIS, 2014).

The coordination between all aspects of workplace design and relocation plan ensures minimal changes during implementation and acquirement of the new place; a minimal delay and lower risks in reaching the objectives of relocation (Rothe *et al.*, 2015a; City of Somerville, 2019).

Ensuring that floor boxes and power outlets locations are coordinated with workplace strategy, compliance to building codes and standards, formulating plans of assigned staff must all discussed thoroughly with business managers (Capasso, 2003; MARIS INTERIORS LLP, 2014; Lin *et al.*, 2016; City of Somerville, 2019). Furtherly, a written key design criterion is a critical consideration that must be reviewed in times of relocation and planning the new space. The more time spent on studying the completeness of these documents the better its outcomes. Thus, a sufficient period should be given for

reviewing relocation studies and documents before the implementation of relocation activities to ensure its applicability (Aguilar *et al.*, 2013; Rothe *et al.*, 2015a).

3.2.2. Identifying means of access for move activities

Identifying means of access allows the better handling of move activities, ensures a smooth move implementation; by giving permits to movers and labors required for transport of assets to its specific workplace location (Capasso, 2003; Centre for excellence in universal design, 2012; Aguilar *et al.*, 2013). Clarity of obstacles, adequate clear openings widths , lobbies and corridors depth and width for movers to ease shifting of assets, identifying building access ways, ease of transition between interior and exterior, clarity from obstructions, assurance of safety, provision of adequate lighting and availability of directing signages all are considerations that lead to secure and lean access for move activities into the new workplace premises (Capasso, 2003; Aguilar *et al.*, 2013; Centre for excellence in universal design, 2012; Scottish Government, 2017).

3.2.3. Identification and monitoring of safety measures during relocation

Safety measures refer to precautions that must be considered during workplace move to reduce the risk related to human health and irreversible damages to assets (Capasso, 2003; Aburumman *et al.*, 2019). Provision of packing guidelines, proper packing of chemicals and equipment, categorizing moved assets based on weight and hazard, development of “From – to” lists and reporting of incidents that may risk safety of workers and staff and use of protective equipment are all important acts that lead to a safe move of workplace premises (Capasso, 2003; Abdullah *et al.*, 2015; Aguilar *et al.*, 2013).

3.2.4. Availability of quality management plan for the relocation process

According to ASTM (2003), quality assurance (QA) is *"all those planned or systematic actions necessary to provide adequate confidence that a material, product, system, or service will satisfy given needs"*. Availability of a quality plan improves the implementation of design, construction and acquirement of the new workplace premises (Hassanain, 2010b). The adequate clarity and selection of high-quality material improves the corporate image, ensures value for money and reliability of assets at the workplace (Hassanain, 2010b; Jancey et al., 2016). Adequate selection and planning of services to be offered at the workplace improves satisfaction of staff and their perception toward the organization (Rothe et al., 2015a). Preiser & Vischer (2008) stated that *"specifications are commonly used to define engineering outputs"*. A building design can be *"tested while it is evolving to ensure the specifications are met. It can also be used to set out, in measurable terms, desired outcomes of investment in building"*. Quality and suitability of space are found to be the most important workplace attribute for occupiers (Rothe et al., 2015a). Thus, the availability of a planned documentation of prospected quality of workplace is a challenging factor that plays a critical role in acquiring a productive workplace.

3.2.5. Minimization of relocation interruption

Business commitments, continuity of work tasks and service provision are all critical considerations for organizations in times of relocation (Capasso, 2003; Preiser, 2005; Aguilar et al., 2013; Rothe et al., 2015a). Phasing the moves, planning the proper timing and coordinating relocation activities with business commitments are necessary acts to minimize interruptions to organizational operation and revenue making (Drake, 2002;

Capasso, 2003; Aguilar *et al.*, 2013; Lin *et al.*, 2016; City of Somerville, 2019). Therefore, seeking every opportunity possible to minimize disruption pours into the success of organization relocation to new premises.

3.2.6. Selection of movers

Capasso (2003) described the process of selecting a mover as the adequate selection of a moving company and preparation of request for proposal for move activities, in order to assess mover capabilities, and its fitness, to successfully deliver the move objectives and implement its activities. The moving company should allow the organization to focus on its core business activities while managing moving related issues on their behalf by coordinating with different organization departments (Goddard *et al.*, 1977; Willett & Green, 1997; Morrison M. Stevens, 2000; Montana.gov, 2019). Movers' capacity, qualifications, previous experience, availability of resources, fees, financial capacity and past performance are all evaluation criterion for the selection of a moving contractor (Elsayah, 2016).

3.2.7. Selection of suppliers

Suppliers are source providers for furniture, assets, materials, finishes, fittings and equipment needed for the fitout and acquirement of the new premises. Selection process dictates the needed considerations used to evaluate several providers of the same items. Availability of stock, origin, previous experience, past performance, fees, minimum order quantity, type of products, manufacturing strategies, geographic preferences and financial capacity (Sonmez, 2006; Elsayah, 2016). This can be a challenging factor especially in

times of big relocation decisions and projects (Capasso, 2003; Aguilar *et al.*, 2013; Serin *et al.*, 2015; Rothe *et al.*, 2015a).

3.2.8. Selection of fit-out contractor

For large organizations, the construction of new premises becomes a considerable option in times of relocation. A contractor is independently assigned to provide furniture, equipment and other assets that lead to the final delivery of a new premise. This should be bonded contractually in terms of implementing interior design and decors that reflect organizational identity (Raewyn, 2014). Past experience, portfolio of projects, competency to implement the design works, adequate provision of implementation team, fees, financial capacity of the contractor, ability to deliver the required functionality of workplace, satisfaction of the deliverables, meeting technical specifications and ability to coordinate with other stakeholders in relocation projects are all evaluation criteria that lead to the successful implementation of a quality new workplace (Capasso, 2003; Elsayah, 2016; Sheikhah, 2014).

3.2.9. Time control and management of the relocation project

Time is an important element for any relocation project at any size. . Identifying business needs for relocation and workplace design must be considered thoroughly to ensure a quality workplace that meets its objectives. In addition, understanding how business commitments interact with workplace determines criticality of time component in relocation (Drake, 2002). Managing & Controlling time through relocation starts by planning high level durations to each activity in relocation that are coordinated with organizational commitments.

Creation of Gantt charts, identifying critical path of time, allowing time for facility lease negotiations and selection of options, designing the workplace, contracting service providers, time for construction & fitout of a new facility, announcing relocation, and implementing the move activities are all necessary considerations of time for relocation.

Design changes, inaccurate evaluation of project time or durations, complexity of works, non-performance of contractors, suppliers and movers and lack of experience in relocation projects are all challenges that risks finishing relocation as timely planned. Thus, there has to be precautionary floats of time for predicted areas of change and corrective acts for unforeseen ones to ensure finishing relocation as planned (Olawale & Sun, 2010).

For relocation, time becomes a great challenge especially when organizations need to access a specific market to improve its competitiveness. The control over time ensures that deviations from original plan are kept minimal to avoid costly impacts on the organization (Drake, 2002; Capasso, 2003; ASTM International, 2014; Langley, 2017).

3.2.10. Cost control and management of the relocation project

Organizational workplace facilities are capitals that should be effectively invested. Thus, managing and controlling the costs according to a detailed budget ensures minimal deviations from original scope and balances unjustified changes through implementation of relocation. Thus, resources costs are categorized under different cost centers and budget boundaries will be monitored accordingly (Drake, 2002; ASTM International, 2014; Olawale & Sun, 2010).

3.3 FACTORS RELATED TO THE POST-RELOCATION PHASE

3.3.1. Availability and adequacy of post-relocation checklists

ASTM International (2013a) defined rating process as “*determining the serviceability of a facility for a specified purpose*”. The availability of a checklists after moving into new workplace premises are important tool to ensure systematically that every aimed functional, technical and organizational objectives are met. The checklists can be developed to cover several aspects such as: after installing, modifying equipment or workstations, assuring assigned staff to specific zones, checking issuance of legal and regulative approval certificates that are necessary for safe operation of the workplace, assure deliverables completeness of relocation procuring activities and for checking systems operation, integrity and performance (Raz *et al.*, 1998; Attwood, 1996; Capasso, 2003; Shaw & Feuerstein, 2004; Hills & Levy, 2014). Hence, the checklists work as a review tool for the relocation activities (US Department of Defense, 2001).

3.3.2. Compliance of suppliers, movers, installers and contractors to the relocation plan

After moving into new premises and conducting site walkthroughs to ensure the compliance of service providers involved to workplace planned objectives, a record of defects and instant changes should be listed. Usually, the listed items are referred to as snags which require necessary corrective action to comply as planned or needed either technically, functionally or by legislative and regulatory requirements. The availability of a quality plan documents in detail the required specifications of workplace assets, systems,

services and fitout. As noncompliance impacts organizational performance and business, it also affects occupant's morale and satisfaction while occupying the new premises. Thus, auditing compliance for parties involved to requirements of relocation is essential for its success (ASTM, 2013b; MARIS, 2014; Facilities department, 2019).

3.3.3. Satisfactory outputs of MEP systems' commissioning

Larsen *et al.* (2018) discussed that commissioning ensures that building features and systems fulfil organizational requirements. "*The commissioning process focusses on securing technical requirements through all project phases, instead of the traditional method of only focusing on performance related perspectives such as scheduling and budgeting*". Aguilar *et al.* (2013) defined commissioning as "*the process of inspecting, testing, starting up, and adjusting building systems and then verifying and documenting that they are operating as proposed and meet the intended design criteria*". According to Hassanain, Al-Hammad, & Fatayer (2014) that HVAC system inadequacy to provide the required comfort zone temperature may lead to harmful discomfort to occupants. Furtherly, insufficient provision of fresh air may cause poor indoor quality, infectious diseases and respiratory illnesses to occupants. Moreover, lack of provision of exhaust fans in kitchens and toilets may propagate foul smells at other adjacent spaces. Furtherly, lack of condensation drainage systems from HVAC units may cause water spillage resulting adherence to biological contaminations and deteriorating finishes and surroundings. Furtherly, noise may occur from air-handling units due to the lack of proper installation of insulation materials exposing occupants to auditory discomfort. Thus, reviewing and checking MEP outputs for satisfactory operation is an important consideration to ensure satisfactory outputs by proper commissioning (ASTM, 2013b).

3.3.4. Availability of maintenance plans

According to Lee & Scott (2009), “*Maintenance work is carried out to maintain the value of the physical assets of the building stocks and quality*”. Furtherly added that it is required “*to extend the life cycle of buildings and its fittings and services*”. Identifying the standard in which it will be used as a reference to maintain and service the building, Identifying the reaction time required for occurrences of defect and corrective actions to be repaired or replaced, identifying cost of routine maintenance, emergency repairs, service contracts required for continuity of functional workplace operation and utilities expenses are all important considerations that must be listed in a maintenance plan to ensure continuity of workplace operation at a specific quality and level (Lee & Scott, 2009; Wu, 2010; Aguilar *et al.*, 2013; Elena *et al.*, 2019). The availability of maintenance plan ensures occupants comfort and satisfaction by mitigating unhealthy conditions at workplace facilities (Wijerathne *et al.*, 2012).

3.3.5. Availability of workplace health and safety plan

Comcare (2016) defined (WHS) workplace health and safety planning as the act of “*providing a workplace that enables all work activities to be carried out safely*” considering “*all reasonably practicable measures to eliminate or minimize risks to the health, safety and welfare of workers, contractors, visitors, and anyone else who may be affected by our operations*” all in accordance to governmental work health and safety acts. Usually, health and safety acts include standardized codes of practice as well as legislative liabilities of organizations toward health and safety of occupants at the workplace (Comcare, 2016). In fact, it communicates organizational commitment to health and safety

at workplace while ensures practiced processes are keeping workers safe, rendering both organization and staff aware of health and safety liabilities and responsibilities (WSCC, 2016). Furtherly, Lin *et al.* (2016) discussed that ensuring occupants safety makes work environment less stressful and more satisfactory to staff and organizational functions.

Lützkendorf *et al.* (2005) discussed that “*access control, security (of staff, and public visitors), fire safety and safety Precautions and provisions for natural catastrophes*” are all exemplary topics for formulating safety and security plans.

WSCC (2016) discussed that no matter is the scale of an organizational business it must ensure the health and safety of its facility occupants and make provisions for a safe workplace. Furtherly, in order for an organization to create a safety plan it must first define its safety and occupants’ responsibilities, identify and control hazards at workplace, as well as train workers on safe work practices and requirements. In fact, tracking health and documenting safety at workplace must be an integral part of any organizational business. Furtherly highlighted, that documenting a workplace health and safety not only helps managing health and safety related concerns and issues at workplace but it provides procedures on record keeping of incidents and observations at workplace which assists development of considerations for enhancing and eliminating defects while planning, leasing and occupying a future organizational facilities.

3.3.6. Availability of orientation plans for the new premises

The availability of orientation plans and documents for building occupants introduces the new premises to workplace tenants in order to ensure familiarity and effective communication of several information such as: move dates, security procedures

safety, health, wayfinding, contact lists and key personnel and general notes of greetings and highlights that the organization would need to announce for employees (Attwood, 1996; American Society for Testing and Materials, 1998; Hiltz, 1999; Capasso, 2003). The distribution of orientation plans ensures organizational commitment to informing employees, that they are acknowledged and accelerates employees satisfaction of the new premises (Aguilar *et al.*, 2013; Attwood, 1996; Capasso, 2003). Methods of delivering orientation plans can be through:

a) **Relocation newsletter:**

a newsletter could be distributed to announce the relocation, its objectives and to provide advisory notes for occupants on what they need to consider at the new premises. This could be combined with site maps, modes of transports suggested for the employees as well as the business customers or facility visitors. Furtherly, it can spread contact information of staff related to facility occupation proceedings and available for help and assistance. An electronic mail could work for the same purpose as well.

b) **Videos:**

videos could be made to document and show progress of new premises. As well as to announce relocation and information about the new premises and workplace use.

c) **Large meetings / forums:**

management officials can bring all occupants together into a large form of meetings to share information about the new premises as well to mitigate any challenges that could disrupt the smooth transition and operation of the new premise.

d) **Roving communicator or listener:**

a specific official can be assigned to listen from the occupants as well to orient them about the new premises. Formal face to face communication with the occupants brings confidence to the occupation of the new premises as well.

e) Desk drops:

Attwood (1996) described it as “*circulars placed on the employees' desks*”. It is the fastest way to distribute informative materials about the new premises as well as it transmits a positive image about the organization. Information could be about: packing, purging files and discarding trash.

f) Orientation programs and assistance: the organization could formulate programs to advice employees and assist them during and after relocation to new premises. Informing about surrounding site amenities such as: available schools, nearest residential areas and guidance about best modes of commutes would make occupants less stressful in times of relocation and after, where it deviates resistance into applicable solutions.

g) Distributing welcome cards and conducting welcome meetings.

3.3.7. Occupants satisfaction with new workplace premises

According to Lin *et al.* (2016) transition is a “*process of how people prepare to go through the process of change and adapt to the environment, which is a longer process that extends from before to after the actual change*”. Rothe *et al.* (2014) highlighted that changing ways of work at the new premises can be a challenge to organizations in times of relocation which requires more effective communication to reduce employee’s resistance. Failure to involve employees can impact the productivity, satisfaction of the employees

and organizational ability to retain talent, which surely affects the organizational service provision.

Stokols & Scharf (2009) defined facility performance evaluation, as the *“assessment of employees’ ratings of environmental conditions within their offices and the actual and perceived impacts of those conditions on personal productivity and well-being”*. Evaluating and documenting tenant’s satisfaction and productivity trends after relocation is essential to understand relocation impacts on workplace tenants (Capasso, 2003; Rothe *et al.*, 2015a). This is important to ensure suitability of the new workplace to organizational functionality as well (Rothe *et al.*, 2015a).

According to Hassanain (2010a), *“Space evaluations are one type of post-occupancy evaluations (POEs) that could be utilized to review the physical conditions of buildings in order to provide insights into the consequences of past design decisions and the resulting building performance”*. Additionally, he recommends that *“POE, as a tool”*, is preferred to be conducted a year after relocation to *“assess staff satisfaction with the layout of the office workplace, and hence, evaluate the outcomes of the project”*. The results obtained can provide an evident understanding for improving existing building and can be considered for designing, constructing and operating new premises in the future. Post occupancy evaluations have several levels of efforts which can be implemented with progression of occupancy most preferably after 6-12 months of occupation to ensure that occupants are fully aware of the challenges at the new workplace (Capasso, 2003; Preiser & Vischer, 2008; Candido *et al.*, 2019). Surveys, checklists to be filled by staff measuring levels of satisfaction in areas such as : ambient noise, visual satisfaction, ergonomics of the workplace and suitability for work tasks and functions is an important consideration that

may lead to simple changes and improved users satisfaction (Capasso, 2003; Stokols & Scharf, 2009).

In a study conducted by Rothe *et al.* (2015a) about challenges which can occur due to relocation in offices on a group of executives and managers found that *“many interviewees were surprised over employee resistance, and described it difficult to manage both short-term reactions to changes and long-term attitudes towards the organization. One interviewee mentioned that the relationship between some units within the organization had suffered as a consequence of moving into an open plan office. Another person raised a concern over whether the organization still remained an attractive employer after moving into an open plan office solution. Further, it was mentioned that it had been difficult to communicate the employee resistance to the top management, who apparently remained unaware of the employees’ reactions”*.

Hills & Levy (2014) highlighted that, personal space reflects *“importance people place on their perceived buffer zone and this may vary according to individual personality, gender, age and culture”*. According to Hills & Levy (2014), there are nine evaluation criteria for workability: psychobiological comfort, psychological security, recognition, density of occupants and proximity to amenities and workplace areas and services, privacy and control, workstyle, adjacency, social interaction. Candido *et al.* (2019) summed that, *“a user-centered approach to monitoring and closing the loop on performance serves to inform design of effective workplaces of the future”*.

3.3.8. Availability of record keeping procedures

University of Houston facilities management dept. (2012) defined record keeping procedures as *“to keep accurate records of projects to serve as a historical record for its real estate and for auditing purposes. These records serve as evidence of the decisions/approvals made throughout the project as well as serving as a benchmark for future projects. All documentation should be filed in a way to allow for quick and easy access by all employees and supervisors of FM”*. Preiser & Vischer (2008) discussed that facility *“audits carried out on existing premises are an essential baseline”*. In fact, recording facility performance after occupation *“makes it easy to understand the current operation”* as it *“provokes thought about potential improvements, and helps to define beneficial changes based on evidence”*. That *“hard evidence”* allows evaluation against industry available benchmarks.

Information about space uses can be insightful for indicating needs of future change and to remedy weak performance with time of occupancy. Thus, training of staff on record keeping procedures and adoption of a computer aided facility management software (CAFM) is highly recommended for proper logging of all facility related issues (University of Houston - Facilities Management dept., 2012).

3.4 DISCUSSION

The preliminary identification of the factors affecting the process of relocation over its three phases (pre-relocation, relocation and post-relocation) have been discussed and investigated more elaborately in this chapter. The understanding of each factor is an important consideration for organizations willing to relocate their workplaces. Further, it guides the professionals to conduct a systematic and smooth workplace relocation. Table 16 illustrates the identified factors.

Based on the literature review and findings, a questionnaire survey is developed to assess the identified thirty-four factors, based on professional's practice and perspectives (facilities managers and real-estate managers). Next chapter will discuss the methodology of assessing the identified factors, list the findings and agreement between the facilities managers and real-estate managers.

The factors identified are categorized under the three phases of relocation: pre-relocation, relocation and post-relocation. The 34 factors are:

Phase	Pre-relocation	Relocation	Post-relocation
Factors	1. Analysis of business needs for relocation 2. Organizational culture and image requirements. 3. Condition of existing facilities and assets 4. Employees needs 5. Functional workplace needs 6. Technical workplace needs 7. Location of the new premises 8. Proximity aspects to amenities 9. Assessment of skeletal characteristics of the new premises 10. Assessment of building services and systems characteristics of the new premises 11. Flexibility and adaptability at the new premises 12. Sustainability measures at the new premises 13. Operation and maintenance requirements at the new premises 14. Development of a relocation plan and schedule 15. Formation of divisions' move teams and identification of relocation stakeholders 16. Allocated budget for relocation	17. Availability of accurate, coordinated and complete relocation documents 18. Identifying means of access for move activities 19. Identification of monitoring of safety measures during relocation 20. Availability of quality management plan for the relocation process 21. Minimization of the relocation interruption 22. Selection of movers 23. Selection of suppliers 24. Selection of fitout contractors 25. Time control and management of the relocation project 26. Cost control and management of the relocation project	27. Availability and adequacy of post-relocation checklists 28. Compliance of suppliers, movers, installers and contractors to the relocation 29. Satisfactory outputs of MEP systems' commissioning 30. Availability of maintenance plans 31. Availability of workplace health and safety plan 32. Availability of orientation plans for the new premises 33. Occupants satisfaction with the new workplace premises 34. Availability of record keeping procedures

Table 17 - The 34 identified factors affecting the process of workplace relocation.

CHAPTER 4

ASSESSMENT OF THE FACTORS AFFECTING ORGANIZATIONAL WORKPLACE RELOCATION PROCESS

Thirty-four factors are identified, to be influencing the lifecycle of organizational workplace relocations, over its three phases namely: Pre-relocation phase, relocation phase and post relocation phase. The thirty-four factors are identified from the review of literature , the conducted factors assessment is described and presented in this chapter. The assesment utilized semi structured interviews based on the distribution of a questionnaire survey as described below:

4.1 DEVELOPMENT OF THE QUESTIONNAIRE SURVEYS

The questionnaire survey was developed, to be distributed, to two groups of respondents, which are facilities managers and real-estate managers. Both are mainly involved in times of organizational workplaces relocation. The targeted responses of facilities managers (FMers) from Saudi Arabia that are high profile by managing:

- largest Private family businesses in Saudi Arabia properties and facilities.
- Governmental organizations.
- Banking organizations.

As well as real-estate managers (REMer) who are managing:

- Best grade high-rise towers at Saudi Arabia.

- Best grade low rise and mid-rise office buildings.
- Corporate real estate organizations.
- Real estate of world known groups of coworking offices.

The questionnaire surveys consisted of three main parts:

- **Part (A):** Respondents general information and local practice.
- **Part (B):** List of the factors needs to be assessed.
- **Part (C):** Additional remarks about the relocation process.

4.1.1. Identification of the sample size

The population of facilities managers and real estate managers in Saudi Arabia were obtained from the Saudi Chamber of Commerce. Due to a governmental policy, details of 200 companies that own high grade office buildings property and 200 corporate real estate companies were released for the study. The sample size equation in chapter one was adopted (equation 1.1 and 1.2) using the list of respondents collected and found to be (n=22) for both groups. Despite this, 32 responses were collected from each group of facility managers and real estate managers to ascertain that a better response sample is obtained.

4.1.2. Pilot testing of the questionnaire survey

The questionnaire was piloted, by conduct of semi structured face to face interviews utilizing the surveys, where 3 facility managers and 3 real estate managers responded to assure the following:

- The adequacy and clarity of the questionnaire questions.
- To identify any repetitions or ambiguities in the survey.
- To incorporate additional information if required.
- To validate readability of the survey questions and correct typos.
- To test the survey response time needed.

After the pilot testing was conducted, the survey was reviewed, and it was found to be inclusive, appreciated by the respondents and they have stated that it gave them insights on areas that they did not consider before. The survey was written in both languages; Arabic and English to facilitate respondents' preference.

4.1.3. Distribution of the questionnaire survey

The questionnaire survey was distributed to 32 facilities managers and 32 real estate managers in Eastern province of Saudi Arabia. The distribution was for the purpose of assessing the importance level of the identified 34 factors. The respondents were asked to indicate a level of importance against the identified factor, through the selection among five Likert scale terms. The terms were listed as: 'Extremely Important', 'Very Important', 'Important', 'Somewhat Important' and 'Not Important'. 64 responses were received for data analysis.

4.1.4. Data analysis

Analysis of the surveyed data, received from the 32 facility managers and the 32 real estate managers, was then conducted. The data was categorized into three main sections:

- Part (A): Respondents general information and local practice.
- Part (B): List of the factors needs to be assessed.
- Part (C): Additional remarks about the relocation process.

For each group of respondents, the factors were assessed separately to identify the test of agreement between both groups of respondents, then the combined respondents were assessed analyzed to observe the collective findings of both groups.

4.1.5. Respondents general information and local practice

This section presents the analysis of general information and local practice section, of the questionnaire survey. After analyzing the responses data into percentages and bar charts they are discussed and analyzed as follows.

4.2 GENERAL INFORMATION OF THE RESPONDENTS

For every question each of the groups will be analyzed sequentially.

4.2.1. Facilities managers work experience

The facilities managers data indicate that (15 out of 32) 47% are '10 to 20 years of experience'. Where, (9 out of 32) 28% are of 'Over 20 years of experience', (7 out of 32) 22% are of '5 to 10 years of experience' and (1 out of 32) 3% are of 'less than 5 years of experience'. (32 out of 32) 100% All respondents have indicated that they have experienced managing at least a relocation project once before which assures their experience relevancy to the subject of study. As illustrated in figure 4.



Figure 4 - Facilities managers (respondents' years of experience managing relocation projects)

4.2.2. Real-estate managers work experience

The real estate managers' responses data indicate that (15 out of 32) are of '10 to 20 years of experience'. Where (8 out of 32) 25% are of '5 to 10 years of experience', (6 out of 32) 19% are of 'over 20 years of experience' and (3 out of 32) 9% are of 'less than 5 years of experience'. (32 out of 32) 100% All respondents have indicated that they have experienced managing at least a relocation project once before which assures their experience relevancy to the subject of study. As illustrated in figure 5.



Figure 5 - Real-estate managers (respondents' years of experience managing relocation projects)

4.2.3. Facilities managers experienced relocation projects' sizes

The facilities managers responses indicate that their experienced relocation projects are sized to be (22 out 32) 69% are on 'low rise office buildings (1-6 floors)' .Where, (11 out of 32) 34% are of 'Med-rise office buildings (7-12 floors)' and (5 out of 32) 16% are of 'High rise office buildings (13 floors and above)'. As illustrated in figure 6.

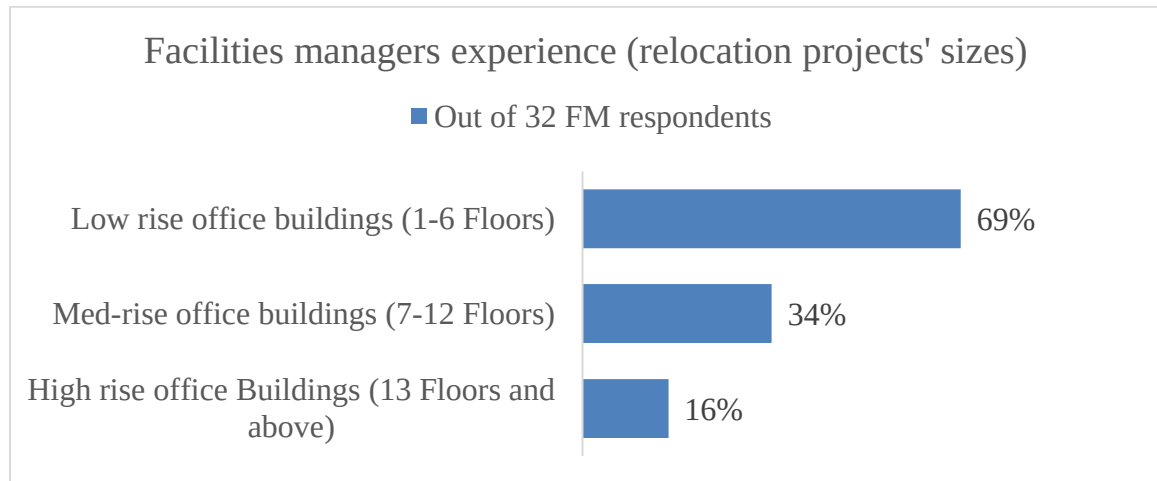


Figure 6 - Facilities managers experience (relocation projects' size)

4.2.4. Real estate managers size of dealt with - relocation projects

The real estate managers respondents indicate that their experienced relocation projects are sized to be (20 out 32) 63% are on 'low rise office buildings (1-6 floors)' .Where, (10 out of 32) 31% are of 'Med-rise office buildings (7 12 floors)' and (12 out of 32) 38% are of 'High rise office buildings (13 floors and above)'. As illustrated in figure 7.

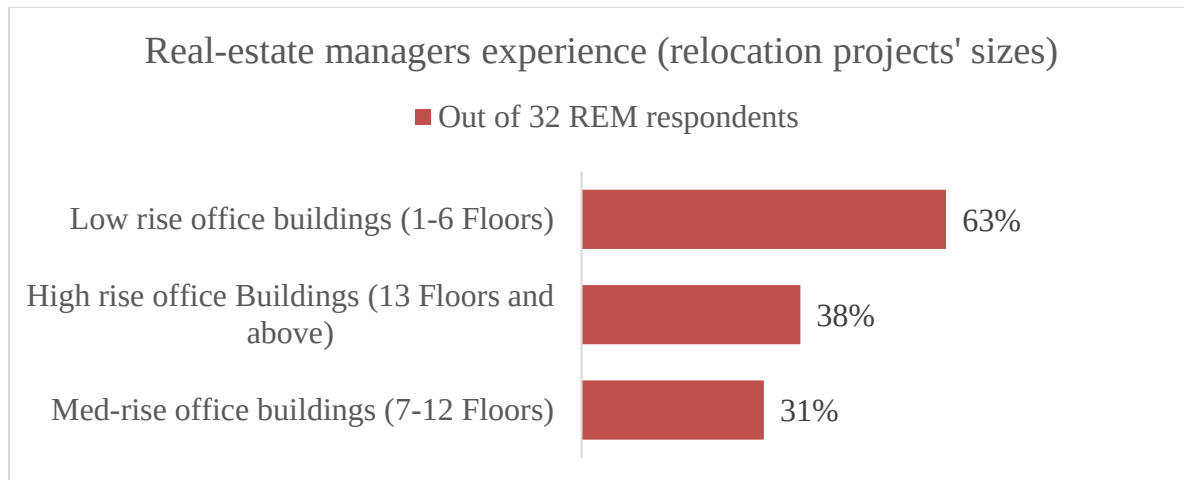


Figure 7 - Real-estate managers experience (relocation projects' sizes)

4.3 RESPONDENTS OPINIONS BASED ON LOCAL PRACTICE

4.3.1. Facilities managers opinion upon the drivers of organizational workplace relocation in Saudi Arabia

The facilities managers respondent group were asked to identify the drivers leading to an organizational workplace relocation in Saudi Arabia; (24 out of 32) 75% of respondents agreed on 'better use of workplace space and capacity'. Where, (17 out of 32) 53% of respondents agreed that 'Transformation to a new mode of workplace layout (Activity based working space / open plan office / other)' could be a driver to organizational workplace relocation, (17 out of 32) 53% of respondents agreed that it could be due to 'Expenses related (High rent, High operational costs, other)', (15 out of 32) 47% agreed on 'Seeking a better image for the organization (Aesthetics)', (14 out of 32) 44% agreed on 'Need to maintain a level of health and safety requirements', (12 out of 32) 38% agreed on the 'Need to meet local legal requirements', (11 out of 32) 34% agreed on 'Downsizing or growth in number of employees', (10 out of 32) 31% agreed on 'Merger

and acquisition of another entity', (9 out of 32) 28% agreed on 'Physical constraints of existing office facility services (Lack of adequate parking's, insecure location, others)', (8 out of 32) 25% agreed on 'Access to qualified talents (ability to recruit more qualified and skillful employees at certain location in compare to an old location)', (8 out of 32) 25% agreed on 'Lack of technological access (High speed internet/ delivery services/ building doesn't meet technological requirements of the organization/ other)', (7 out of 32) 22% agreed on 'End of lease for current facility', (6 out of 32) 19% agreed on 'Centralizing organizational Units/departments', (5 out of 32) 16% agreed on 'Decentralizing organizational units/departments', (5 out of 32) 16% agreed on 'Proximity to governmental or joint entities', (3 out of 32) 9% agreed on 'Gaining access to public transportation', (2 out of 32) 6% agreed on 'Access to lower wages of talent (ability to recruit employees at lower wages for cost savings at certain location in compare to old location)', (2 out of 32) 6% agreed that a 'Management / owner unjustified decision', (2 out of 32) 6% agreed that 'Following real estate market trend / outlook', (1 out of 32) 3% provided that 'International requirements (Business continuity requirements)', (1 out of 32) 3% agreed that 'Lack of security in computer networks' could all be major drivers for organizations to relocate their workplaces. As illustrated in figure 8.

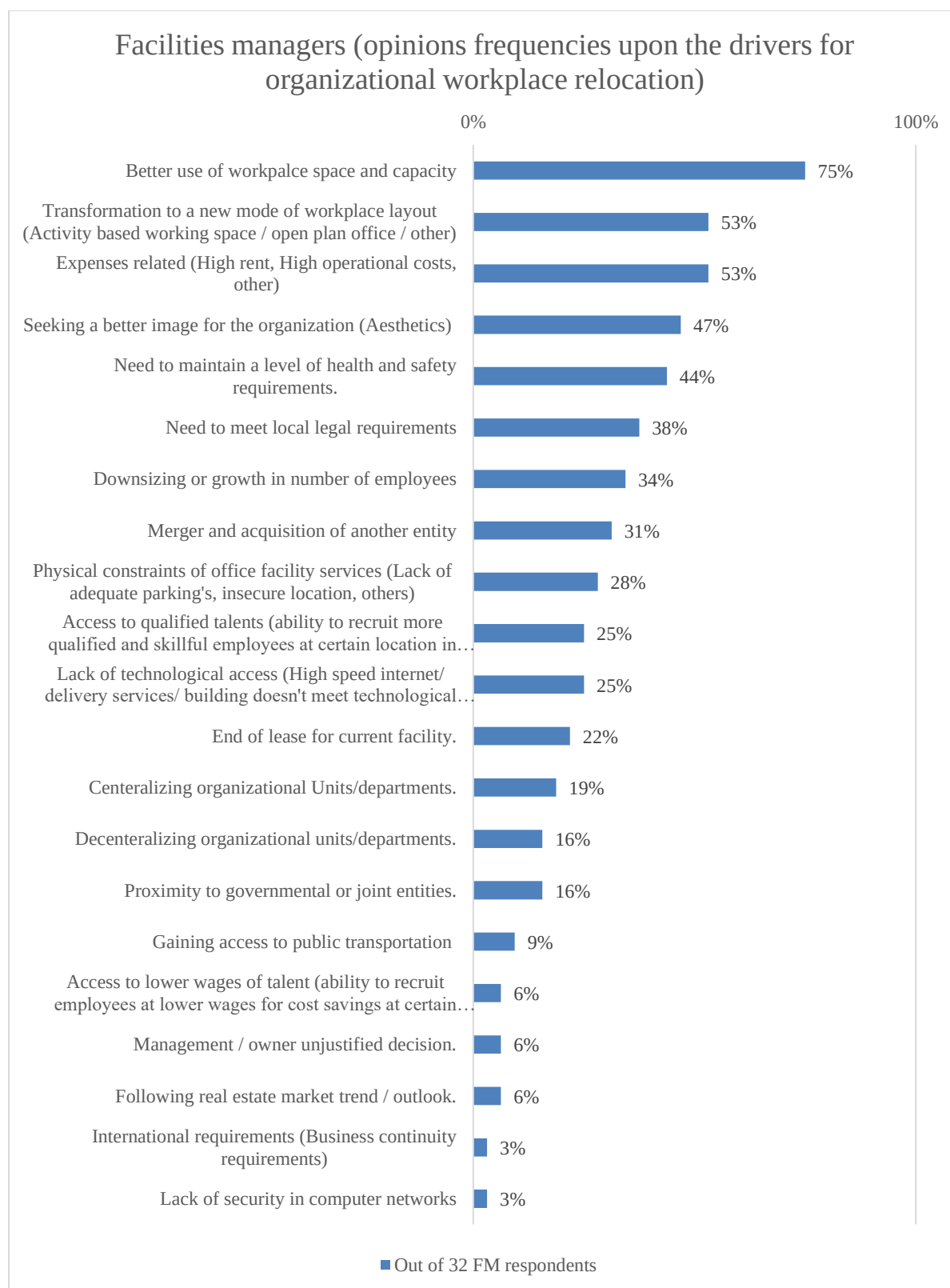


Figure 8 - Facilities managers (opinions frequencies upon the drivers for organizational workplace relocation)

4.3.2. Real-estate managers opinion upon the drivers of organizational workplace relocation in Saudi Arabia

The real-estate managers respondent group were asked to identify drivers leading to an organizational workplace relocation in Saudi Arabia; (24 out of 32) 75% of respondents agreed on 'Better use of workplace space and capacity'. Where, (20 out of 32) 63% agreed on 'Expenses related (High rent, High operational costs, other)', (19 out of 32) 59% agreed on 'Seeking a better image for the organization (Aesthetics)', (17 out of 32) 53% agreed on 'Downsizing or growth in number of employees', (17 out of 32) 53% agreed on 'Physical constraints of office facilities services (Lack of adequate parking's, insecure location, others)', (15 out of 32) 47% agreed on 'Transformation to a new mode of workplace layout (Activity based working space / open plan office / other)', (15 out of 32) 47% agreed on 'End of lease for current facility', (13 out of 32) 41% agreed on 'Need to maintain a level of health and safety requirements', (12 out of 32) 38% agreed on 'Lack of technological access (High speed internet/ delivery services/ building doesn't meet technological requirements of the organization/ other)', (12 out of 32) 38% agreed on 'Centralizing organizational Units/departments', (12 out of 32) 38% agreed on 'Proximity to governmental or joint entities', (12 out of 32) 38% agreed on 'Merger and acquisition of another entity', (12 out of 32) 38% agreed on 'Need to meet local legal requirements', (8 out of 32) 25% agreed on 'Following real estate market trend / outlook', (5 out of 32) 16% agreed on 'Access to qualified talents (ability to recruit more qualified and skillful employees at certain location in compare to an old location)', (5 out of 32) 16% agreed on 'Gaining access to public transportation', (3 out of 32) 9% agreed on 'Decentralizing organizational units/departments', (3 out of 32) 9% agreed on 'Management / owner

unjustified decision'. (1 out of 32) 3% agreed on 'Access to lower wages of talent (ability to recruit employees at lower wages for cost savings at certain location in compare to old location)' that all could be drivers of organizational workplace relocation in Saudi Arabia. All respondents agreed that 'International requirements (Business continuity requirements) and 'Lack of security in computer networks' are not related to drivers for workplace relocation in Saudi Arabia. As illustrated in figure 9.

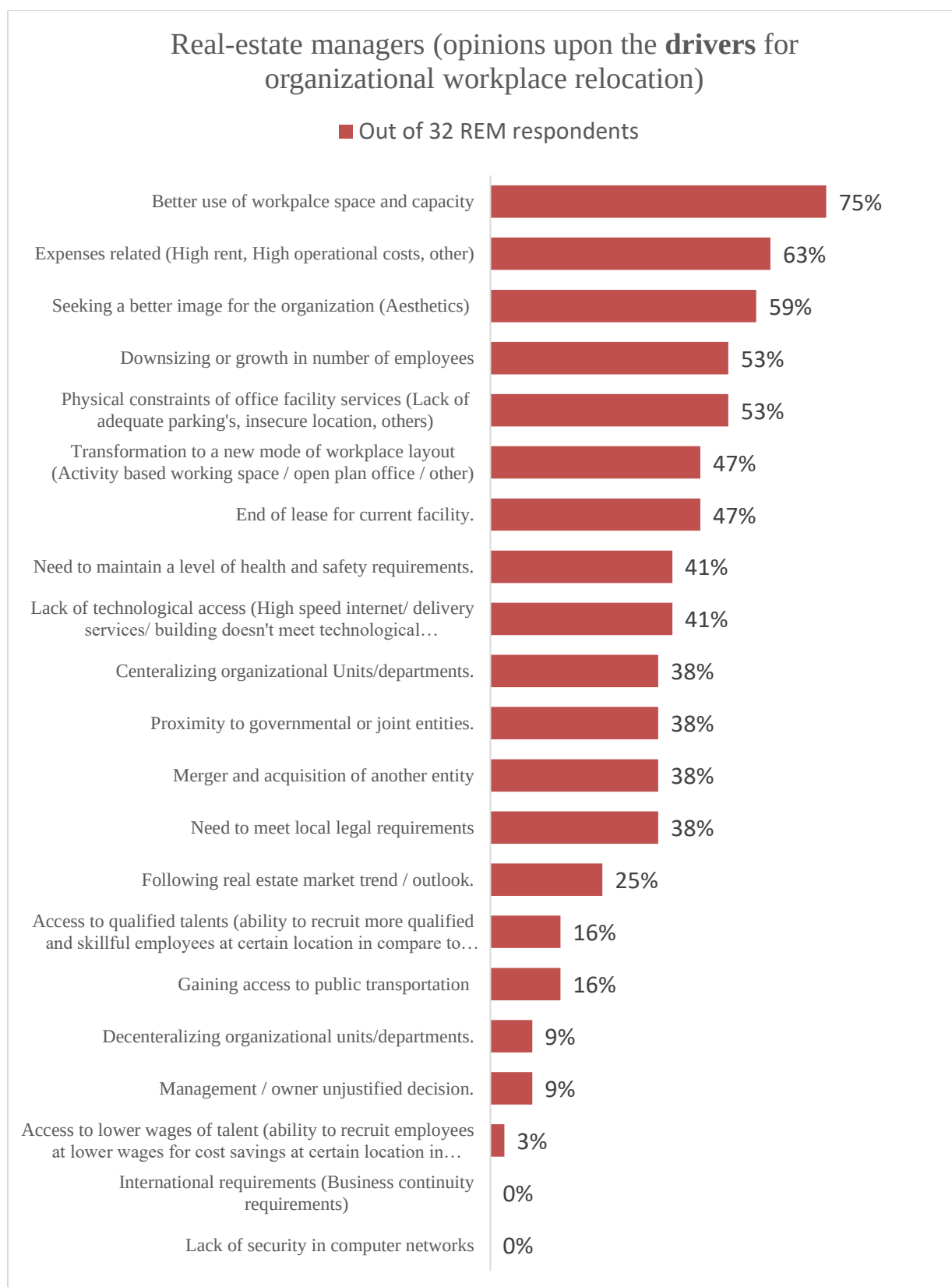


Figure 9 - Real-estate managers (opinions upon the drivers for organizational workplace relocation)

4.3.3. Facilities managers opinion upon challenges faced during organizational workplace relocation in Saudi Arabia

The facilities managers respondent group were asked to identify challenges in times of organizational workplace relocation in Saudi Arabia; (20 out of 32) 63% of respondents agreed on 'Identification of business needs'. Where, (20 out of 32) 63% agreed on 'Budgetary limitations and control over expenses' to be challenging in times of organizational workplaces relocation in Saudi Arabia, (19 out of 32) 59% agreed on 'Business interruptions & sense of urgency', (16 out of 32) 50% agreed on 'Time allocated for planning the relocation', (14 out of 32) 44% agreed on 'Design of the new workplace premises', (12 out of 32) 38% agreed on 'lack of skilled movers', (12 out of 32) 38% agreed on 'Employees resistance to change, tendency to relax/ pause works and attachment to old location (e.g. proximity to housings, schools, etc.)', (12 out of 32) 38% agreed on 'Specification of space requirements', (11 out of 32) 34% agreed on 'Negotiation with Landlords', (10 out of 32) 31% agreed on 'Unavailability of complete, coordinated and well documented relocation plan', (10 out of 32) 31% agreed on 'Search for possible premises', (10 out of 32) 31% agreed that 'Movement to, and fine tuning of the new workplace', (9 out of 32) 28% agreed that 'Compliance to legal requirements of moving out from old premises (e.g. dilapidation/ exit repairs, contractual commitment dates, etc.)', (8 out of 32) 25% agreed that 'Evaluation of possible premises', (5 out of 32) 16% agreed on 'Complexity of buildings systems and technologies', (5 out of 32) 16% agreed on 'Distance of relocation (between old location and new location)', (2 out of 32) 6% agreed on 'Constructing your own premises, Selection of a proper designer and contractor', (1 out of 32) 3% agreed on 'Communicate with customers and get them know your new

location' as all to be challenges for organizations in times of workplace relocation. All respondents didn't provide any opinion on challenges suggested by facility managers namely: 'Timing of the fit-out of new premises', 'working in accordance with new landlord's processes', 'Adequacy and availability of sufficient Utilities (backup power, water RO, pumps, meterage etc.)', 'Compliance to regulatory requirements for the new building' and 'Moving data servers requires a specialist and short timing'. As illustrated in figure 10.

Facilities managers (opinions upon the **challenges** faced in organizational workplace relocation)

■ Out of 32 FM respondents

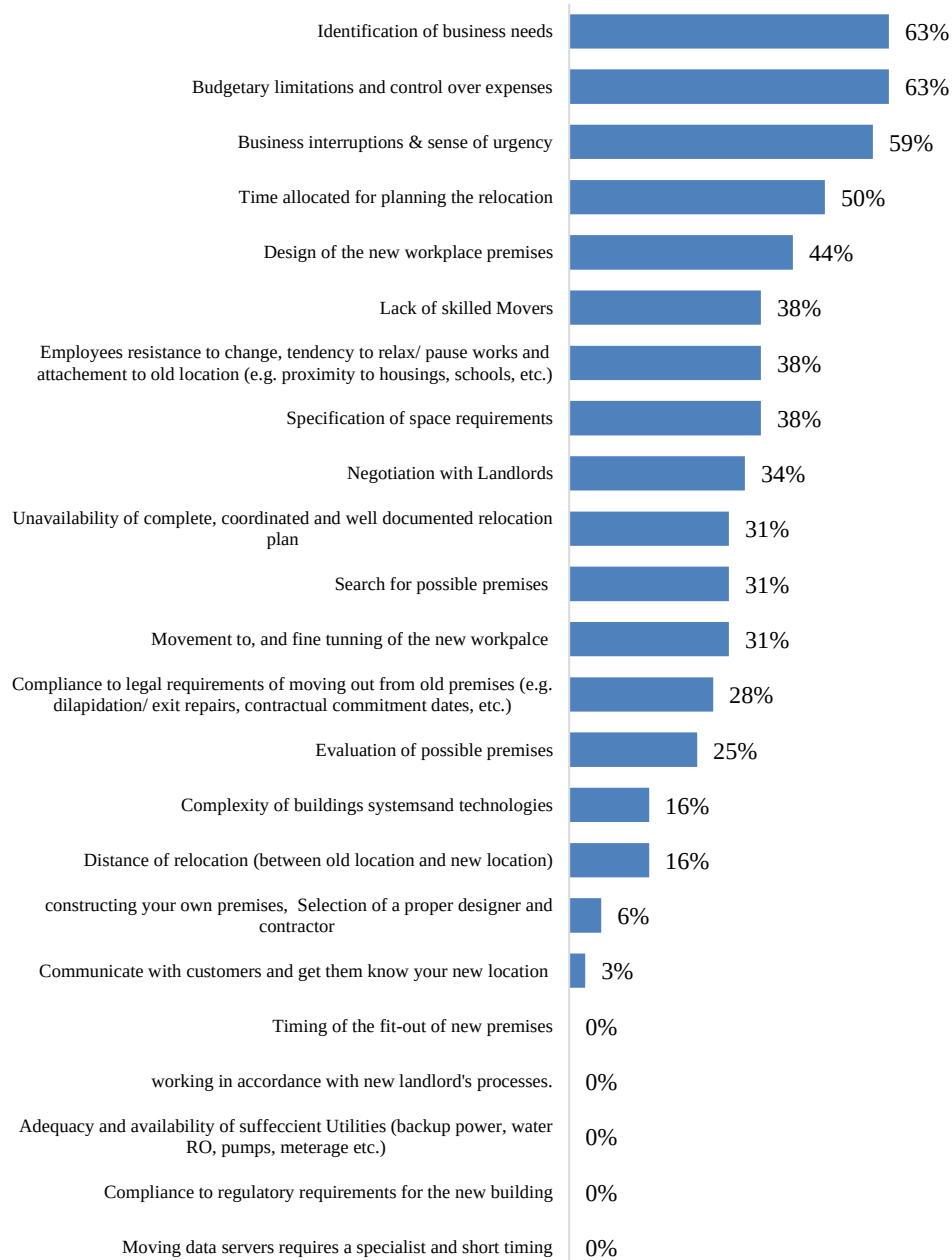


Figure 10 - Facilities managers (opinions upon the challenges faced in organizational workplace relocation)

4.3.4. Real-estate managers opinion upon the challenges faced during organizational workplace relocation in Saudi Arabia

The real-estate managers respondent group were asked to identify drivers leading to an organizational workplace relocation in Saudi Arabia; (25 out of 32) 78% of respondents agreed on 'Budgetary limitations and control over expenses'. Where, (22 out of 32) 69% agreed on 'Time allocated for planning the relocation' to be a challenge in times of organizational workplaces relocation, (18 out of 32) 56% agreed on 'Unavailability of complete, coordinated and well documented relocation plan', (17 out of 32) 53% agreed on 'Negotiation with Landlords', (15 out of 32) 47% agreed on 'Identification of business needs', (15 out 32) 47% agreed on 'Business interruptions & sense of urgency', (14 out of 32) 44% agreed on 'Specification of space requirements', (13 out of 32) 41% agreed on 'Compliance to legal requirements of moving out from old premises (e.g. dilapidation/ exit repairs, contractual commitment dates, etc.)', (12 out of 32) 38% agreed on 'Evaluation of possible premises', (12 out of 32) 38% agreed that 'Design of the new workplace premises', (11 out of 32) 34% agreed on 'Complexity of buildings systems and technologies', (10 out of 32) 31% agreed on 'Lack of skilled Movers', (10 out of 32) 31% agreed on 'Search for possible premises', (10 out of 32) 31% agreed on 'Movement to, and fine tuning of the new workplace', (9 out of 32) 28% agreed on 'Distance of relocation (between old location and new location)', (8 out of 32) 25% agreed on 'Employees resistance to change, tendency to relax/ pause works and attachment to old location (e.g. proximity to housings, schools, etc.)', (1 out of 32) 3% agreed on 'Timing of the fit-out of new premises', (1 out of 32) 3% agreed on 'working in accordance with new landlord's processes', (1 out of 32) 3% agreed on 'Adequacy and availability of

sufficient utilities (backup power, water RO, pumps, meterage etc.)', (1 out of 32) 3% agreed on 'Compliance to regulatory requirements for the new building', (1 out of 32) 3% agreed on 'Moving data servers requires a specialist and short timing' all to be challenges in times of organizational workplace relocation. Where all respondents agreed that 'Communicate with customers and get them know your new location' and 'Constructing your own premises, selection of a proper designer and contractor' not to be challenging in times of organizational workplace relocations. As illustrated in figure 11.

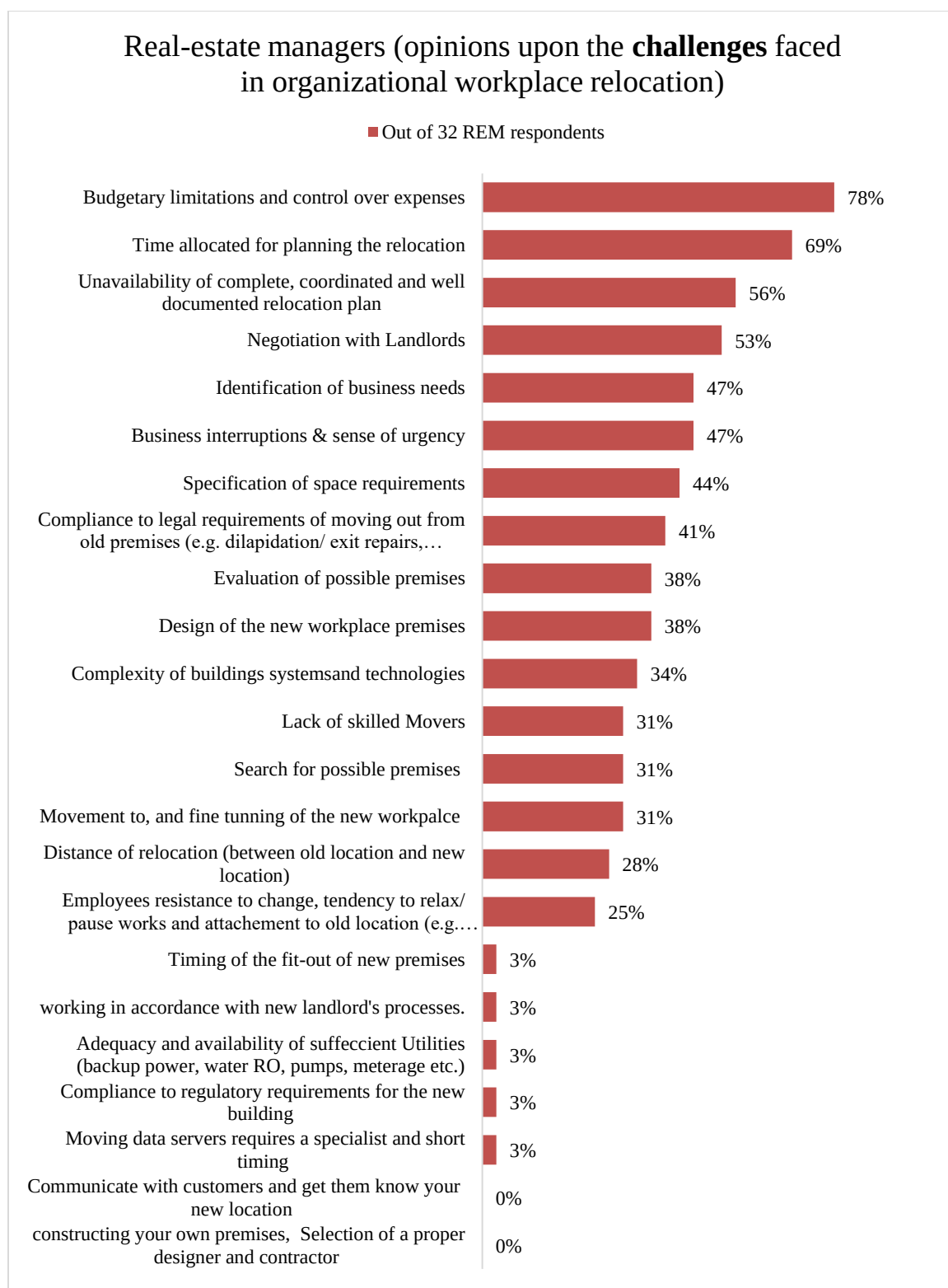


Figure 11 - Real-estate managers (opinions upon the challenges faced in organizational workplace relocation)

4.3.5. Facilities managers opinion upon the best scenarios, for managing organizational workplace relocation in Saudi Arabia

The facilities managers respondent group were asked to identify the best probable scenarios for managing organizational workplace relocation in Saudi Arabia; (28 out of 32) 88% agreed that ‘Approaching an organizational facility manager to manage the relocation from old to new premises’ would be a suitable option. Where, (9 out of 32) 28% agreed that ‘outsourcing the relocation process to be managed by a corporate real estate agency from the old premises to the new premises with support of HR department’ and (7 out of 32) 22% agreed that ‘Assigning an administrative staff from the organization to manage the relocation process’ would be an acceptable scenarios for managing organizational workplace relocation. As illustrated in figure 12.

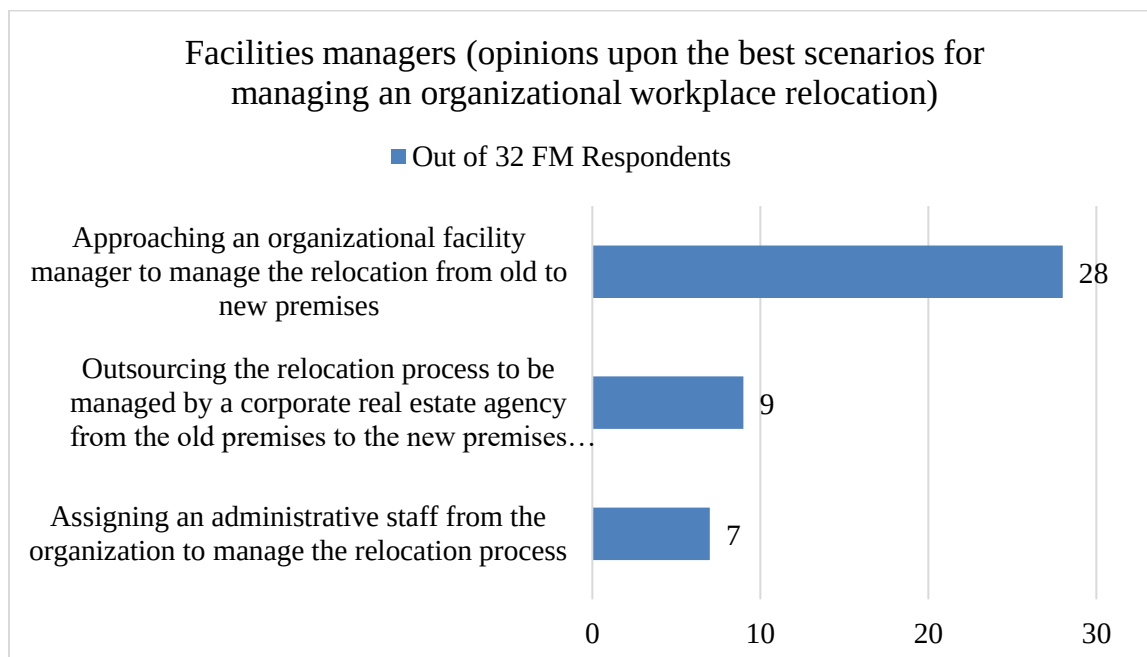


Figure 12 - Facilities managers (opinions upon the best scenarios for managing an organizational workplace relocation)

4.3.6. Real-estate managers opinion upon the best scenarios for managing organizational workplace relocation in Saudi Arabia

The real-estate managers respondent group were asked to identify the best probable scenarios for managing organizational workplace relocation in Saudi Arabia; (16 out of 32) 50% agreed that ‘Approaching an organizational facility manager to manage the relocation from old to new premises’ would be a suitable option. Where, (20 out of 32) 63% agreed that ‘outsourcing the relocation process to be managed by a corporate real estate agency from the old premises to the new premises with support of HR department’ and (6 out of 32) 19% agreed that ‘Assigning an administrative staff from the organization to manage the relocation process’ would be an acceptable scenarios for managing organizational workplace relocation. As illustrated in figure 13.

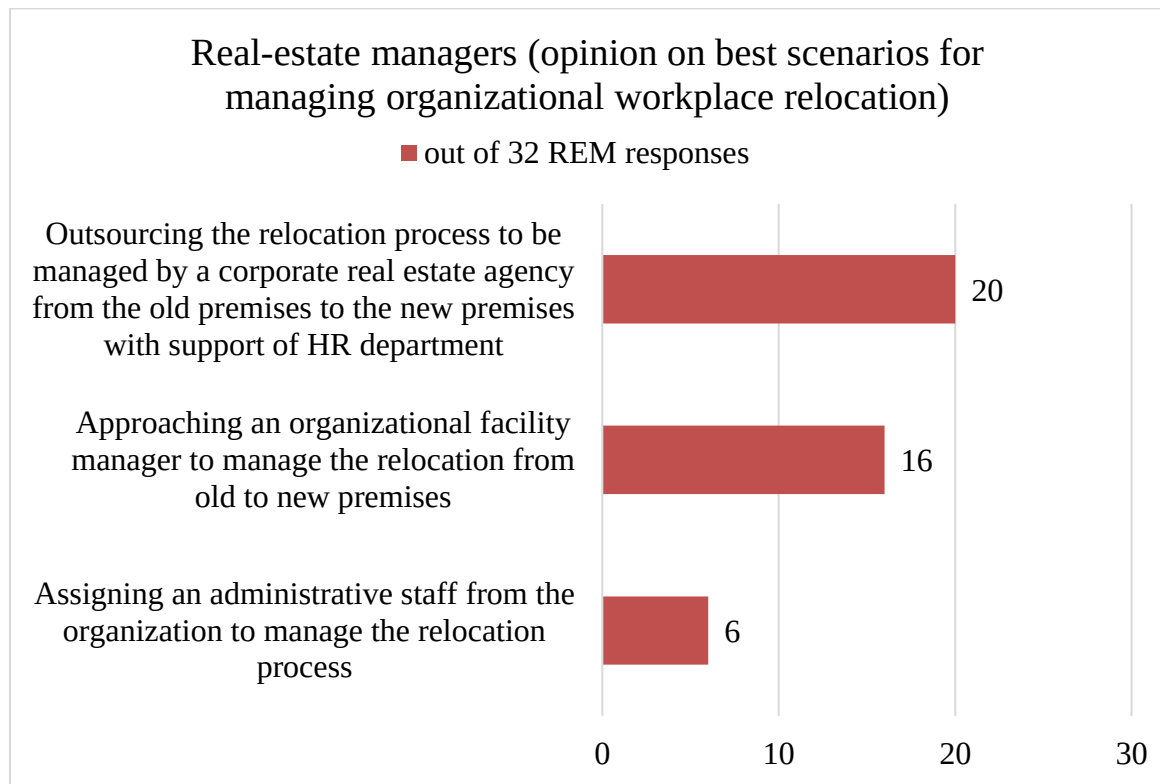


Figure 13 - Real-estate managers (opinion on best scenarios for managing organizational workplace relocation)

4.3.7. Facilities managers opinion upon criterions for selection of a mover in times of organizational workplace relocation

The facilities managers respondent group were asked to identify the most important criterion for selection of a mover in times of organizational workplace relocation in Saudi Arabia; (20 out of 32) 63% agreed that a mover who is capable of ‘using of advanced labelling, boxing and shifting resources and technologies’. Where, (18 out of 32) 56% of respondents agreed that ‘Portfolio of previous relocation projects’, (18 out of 32) 56% agreed that ‘Fees (total cost, profit, extra fees , etc.)’, (17 out of 32) 53% agreed that ‘Number of skilled and unskilled mover workforce’, (16 out of 32) 50% agreed that ‘Agility, number and capacity of moving vehicles and equipment’, (11 out of 32) 34% agreed that ‘Number of other commitments and adequacy to the relocation / move timing’, (10 out of 32) 31% agreed that ‘Financial Status of the mover’, (9 out of 32) 28% agreed that ‘Feedback from previous work references (e.g. letters of appreciation, final delivery and handing over letters or certificates of payments)’, (1 out of 32) 3% agreed that ‘Allocating enough contingency time to complete the project, staging the moves and selecting the most proper time of the year’ and (1 out of 32) 3% agreed that ‘Ability to provide sufficient warranty on moved items ‘ are all considerable criterion for selection of mover in times of organizational workplace relocation. As illustrated in figure 14.

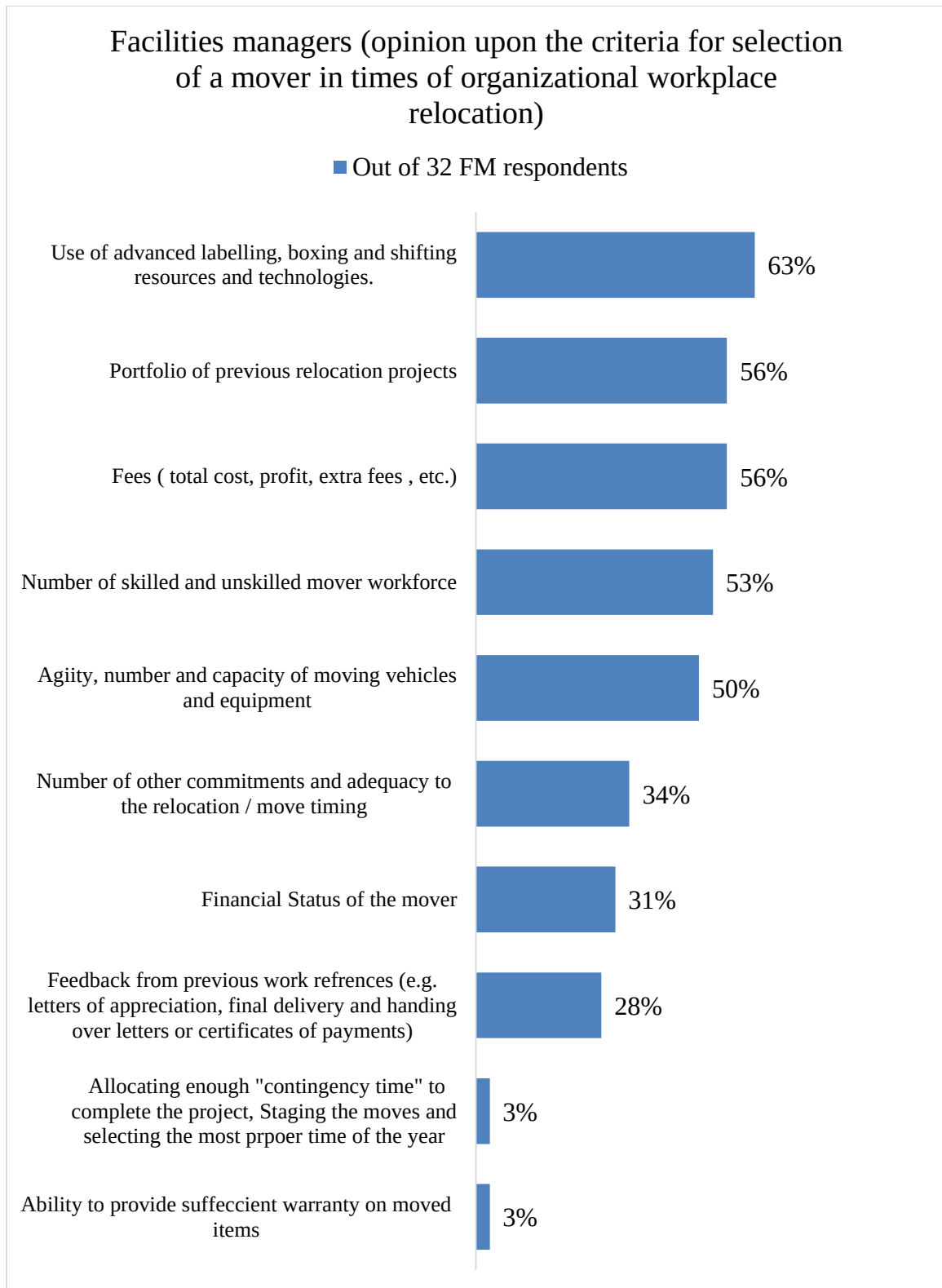


Figure 14 - Facilities managers (opinion upon the criteria for selection of a mover in times of organizational workplace relocation)

4.3.8. Real-estate managers opinion upon criterions for selection of a mover in times of organizational workplace relocation

The real-estate managers respondent group were asked to identify the most important criterion for selection of a mover in times of organizational workplace relocation in Saudi Arabia; (25 out of 32) 78% agreed that a mover who is capable of providing a sufficient 'Portfolio of previous relocation projects. Where, (25 out of 32) agreed that 'Agility, number and capacity of moving vehicles and equipment' of a mover, (22 out of 32) 69% agreed on 'Number of skilled and unskilled mover workforce', (22 out of 32) 69% agreed that 'Use of advanced labelling, boxing and shifting resources and technologies', (22 out of 32) 69% agreed that service 'Fees (total cost, profit, extra fees , etc.)', (21 out of 32) 66% agreed that positive 'Feedback from previous work references (e.g. letters of appreciation, final delivery and handing over letters or certificates of payments)', (13 out of 32) 41% agreed that 'financial Status of the mover', (12 out of 32) 38% agreed that 'Number of other commitments and adequacy to the relocation / move timing', (2 out of 32) 6% agreed that the mover 'ability to provide sufficient warranty on moved items' and (1 out of 32) 3% agreed that 'Allocating enough contingency time to complete the project , staging the moves and selecting the most proper time of the year' are all considerable criterion that lead to successful selection of a mover in times of organizational workplace relocation in Saudi Arabia.

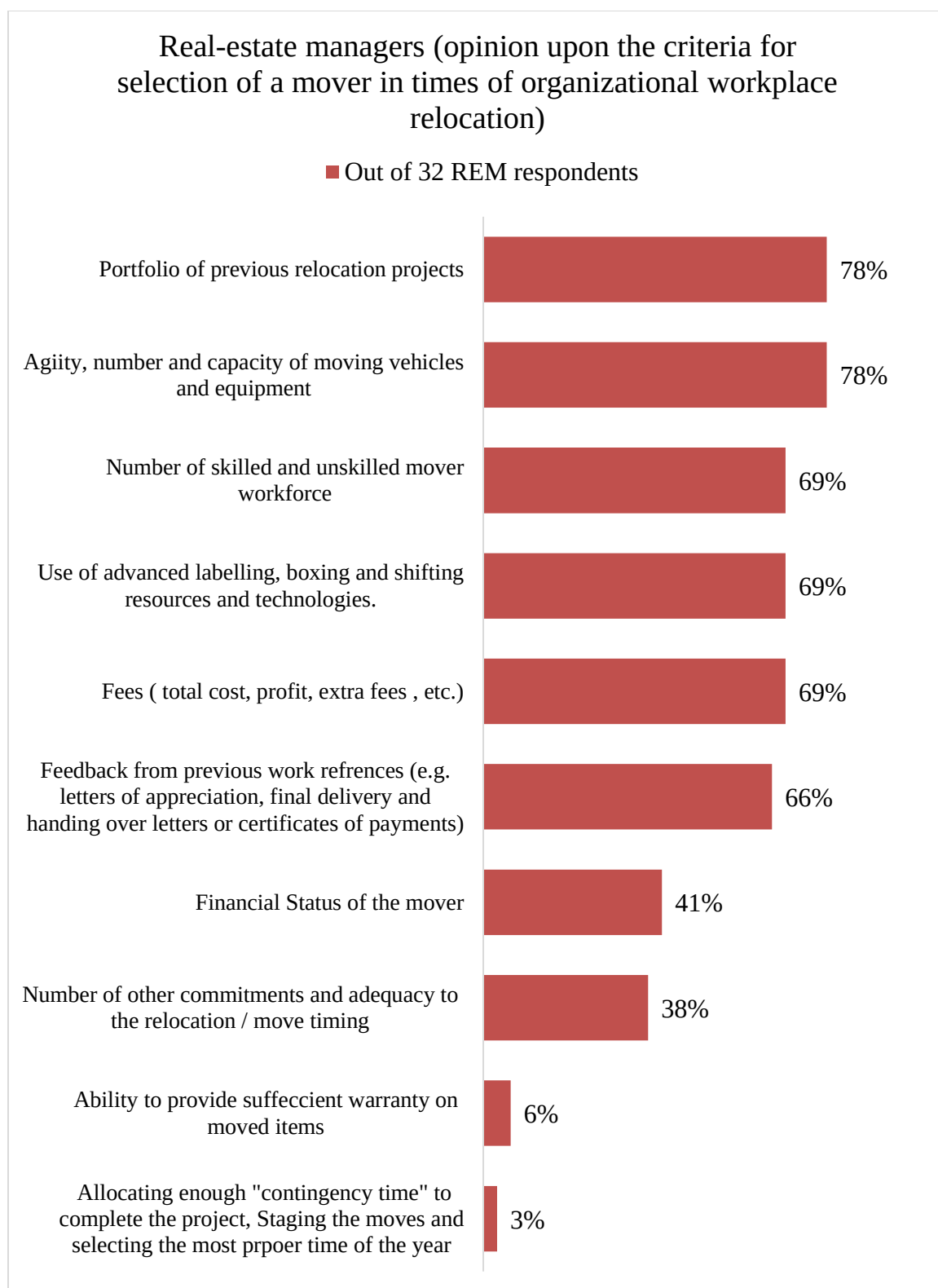


Figure 15 -Real-estate managers (opinion upon the criteria for selection of a mover in times of organizational workplace relocation)

4.3.9. Facilities managers opinion upon criterions for selection of a supplier in times of organizational workplace relocation

The facilities managers respondent group were asked to identify the most important criterion for selection of a supplier in times of organizational workplace relocation in Saudi Arabia; (24 out of 32) 75% agreed that a supplier should ‘Comply to workplace design and relocation plan’. Where, (22 out of 32) 69% agreed that ‘Lead times for delivering materials’, (21 out of 32) 66% agreed that ‘Availability of stock for the required materials (finishes, furniture etc.)’, (18 out of 32) 56% agreed that ‘Fees (total cost, profit, extra fees, etc.)’, (17 out of 32) 53% agreed that ‘Ease of installation and packaging, agility of the supplier products’, (16 out of 32) 50% agreed that ‘Availability of certified tests and accreditation for the supplier’, (14 out of 32) 44% agreed that ‘Portfolio of previous projects’, (14 out of 32) 44% agreed that ‘Number of other commitments and adequacy to the relocation/move timing’, (10 out of 32) 31% agreed that ‘Evaluation of the manufacturing facilities and its capacity, origin of materials’, (7 out of 32) 22% agreed that ‘Financial status of the supplier’ are all considerable criterion for the successful selection of a supplier in times of organizational workplace relocation in Saudi Arabia. All respondents did not highlight a need to ‘Visit previous and running projects of supplier’ as a criterion for successful selection of a supplier in times of organizational workplace relocation in Saudi Arabia. As illustrated in figure 16.

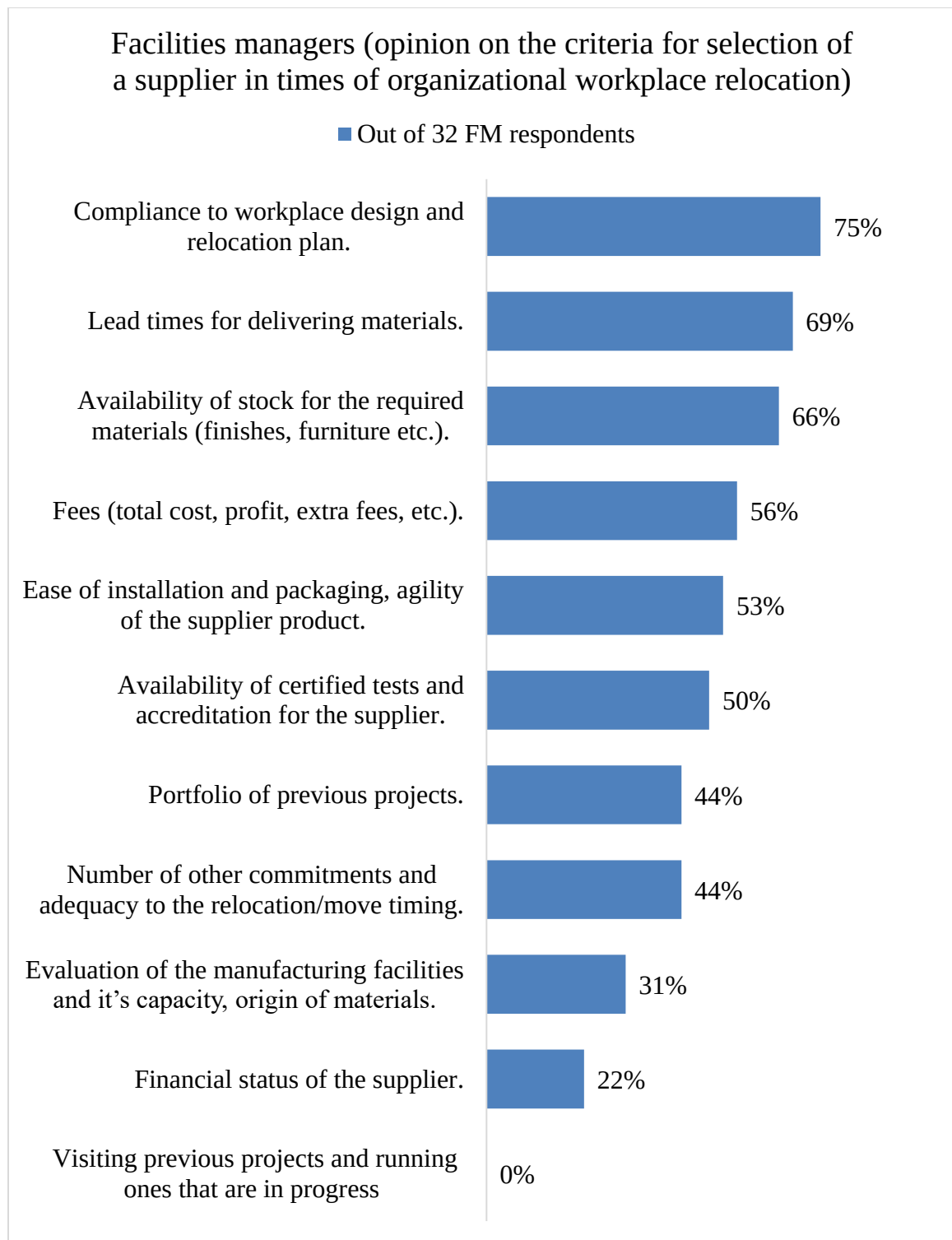


Figure 16 - Facilities managers (opinion on the criteria for selection of a supplier in times of organizational workplace relocation)

4.3.10. Real-estate managers opinion upon criterions for selection of a supplier in times of organizational workplace relocation

The real-estate managers respondents' group were asked to identify the most important criterions for selection of a supplier in times of organizational workplace relocation in Saudi Arabia; (28 out of 32) 88% agreed that a supplier should be able to offer sufficient 'lead times for delivering materials'. Where, (26 out of 32) 81% agreed that offered 'Fees (total cost, profit, extra fees, etc.)', (25 out of 32) 78% agreed that provision of sufficient 'Portfolio of previous projects', (21 out of 32) 66% agreed that 'Availability of stock for the required materials (finishes, furniture etc.)', (20 out of 32) 63% agreed that 'compliance to workplace design and relocation plan', (19 out of 32) 59% agreed on the 'Availability of certified tests and accreditation for the supplier', (18 out of 32) 56% agreed on 'Ease of installation and packaging, agility of the supplier product', (17 out of 32) 53% agreed on 'Number of other commitments and adequacy to the relocation/move timing', (16 out of 32) 50% agreed on 'Evaluation of the manufacturing facilities and its capacity, origin of materials', (14 out of 32) 44% agreed on the 'Financial status of the supplier' and (1 out of 32) 3 % agreed on 'Visiting previous projects and running ones that are in progress' to be all considerable criterion for the successful selection of a supplier in times of organizational workplace relocation in Saudi Arabia.

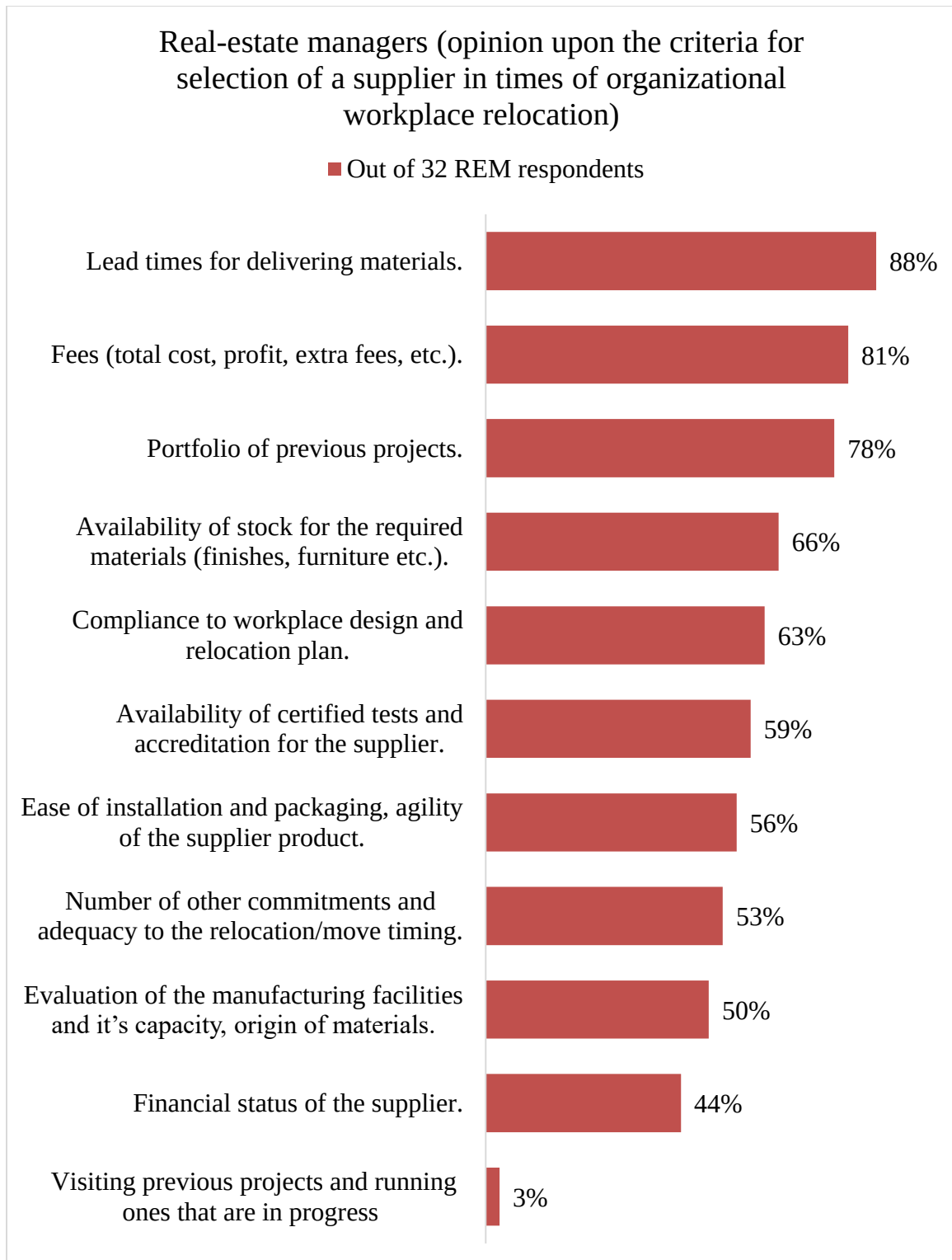


Figure 17 - Real-estate managers (opinion upon the criteria for selection of a supplier in times of organizational workplace relocation)

4.3.11. Facilities managers opinion upon criteria for selection of a fit-out contractor in times of organizational workplace relocation

The facilities managers respondent group were asked to identify the most important criteria for selection of a fit-out contractor in times of organizational workplace relocation in Saudi Arabia; (23 out of 32) 72% agreed that a fit-out contractor should have the 'Competency to coordinate with several contractors, movers and installers'. Where, (21 out of 32) 66% agreed that based on the 'Portfolio of previous projects', (19 out of 32) 59% agreed that based on the 'Number of other commitments and adequacy to the relocation/move timing', (19 out of 32) 59% agreed that based on the 'Number of skilled and un-skilled workforce', (17 out of 32) 53% agreed that based on contractor 'Fees (total cost, profit, extra fees, etc.)', (10 out of 32) 31% agreed that 'Financial status of the contractor', (1 out of 32) 3% agreed that based on 'contractor experience about projects which are similar to organizational culture' are considerable criteria that can lead to the successful selection of a fit-out contractor. Where all respondents didn't select 'Competency of the contractors to carry out the design specifications details and activities' as a considerable criterion for the selection of a fit-out contractor. As illustrated in figure 18.

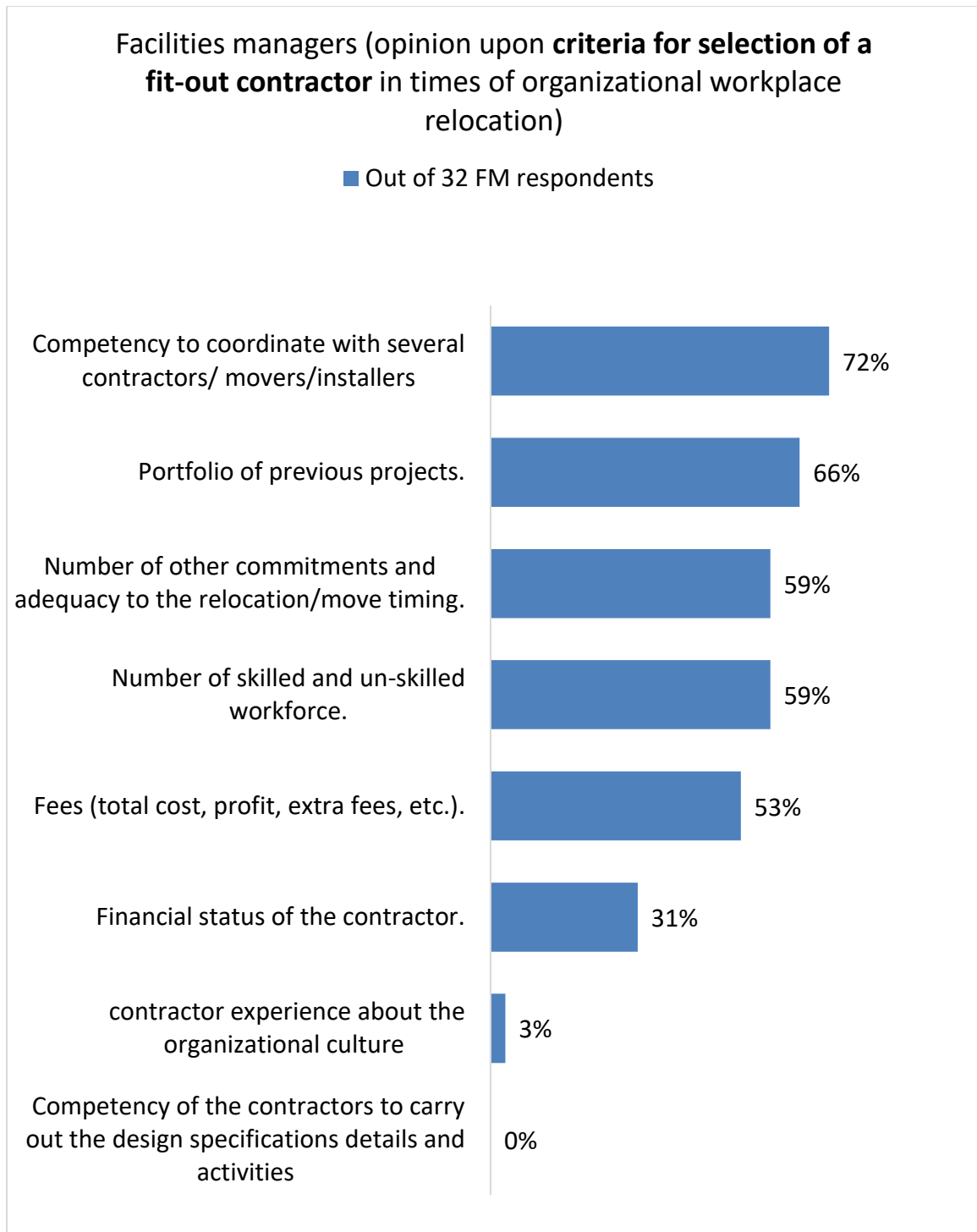


Figure 18 - Facilities managers (opinion upon criteria for selection of a fit-out contractor in times of organizational workplace relocation)

4.3.12. Real-estate managers opinion upon criterion for selection of a fit-out contractor in times of organizational workplace relocation

The real estate managers respondents' group were asked to identify the most important criterion for selection of a fit-out contractor in times of organizational workplace relocation in Saudi Arabia; (28 out of 32) 88% agreed that a contractor should have a sufficient 'Portfolio of previous projects', (24 out of 32) 75% agreed on that contractor 'Fees (total cost, profit, extra fees, etc.)', (21 out of 32) 66% agreed that 'Competency to coordinate with several contractors/movers/installers', (17 out of 32) 53% agreed on 'Financial status of the contractor', (17 out of 32) 53% agreed on 'Number of skilled and un-skilled workforce', (16 out of 32) 50% agreed that 'Number of other commitments and adequacy to the relocation/move timing', (1 out of 32) 3% agreed that 'Competency of the contractors to carry out the design specifications details and activities' all to be considerable criterion for the successful selection of a fit out contractor in times of organizational workplace relocation in Saudi Arabia. Where all respondents didn't highlight the criteria 'contractor experience about the organizational culture' as a considerable criterion for the selection of a fitout contractor in times of organizational workplace relocation in Saudi Arabia. As illustrated in figure 19.

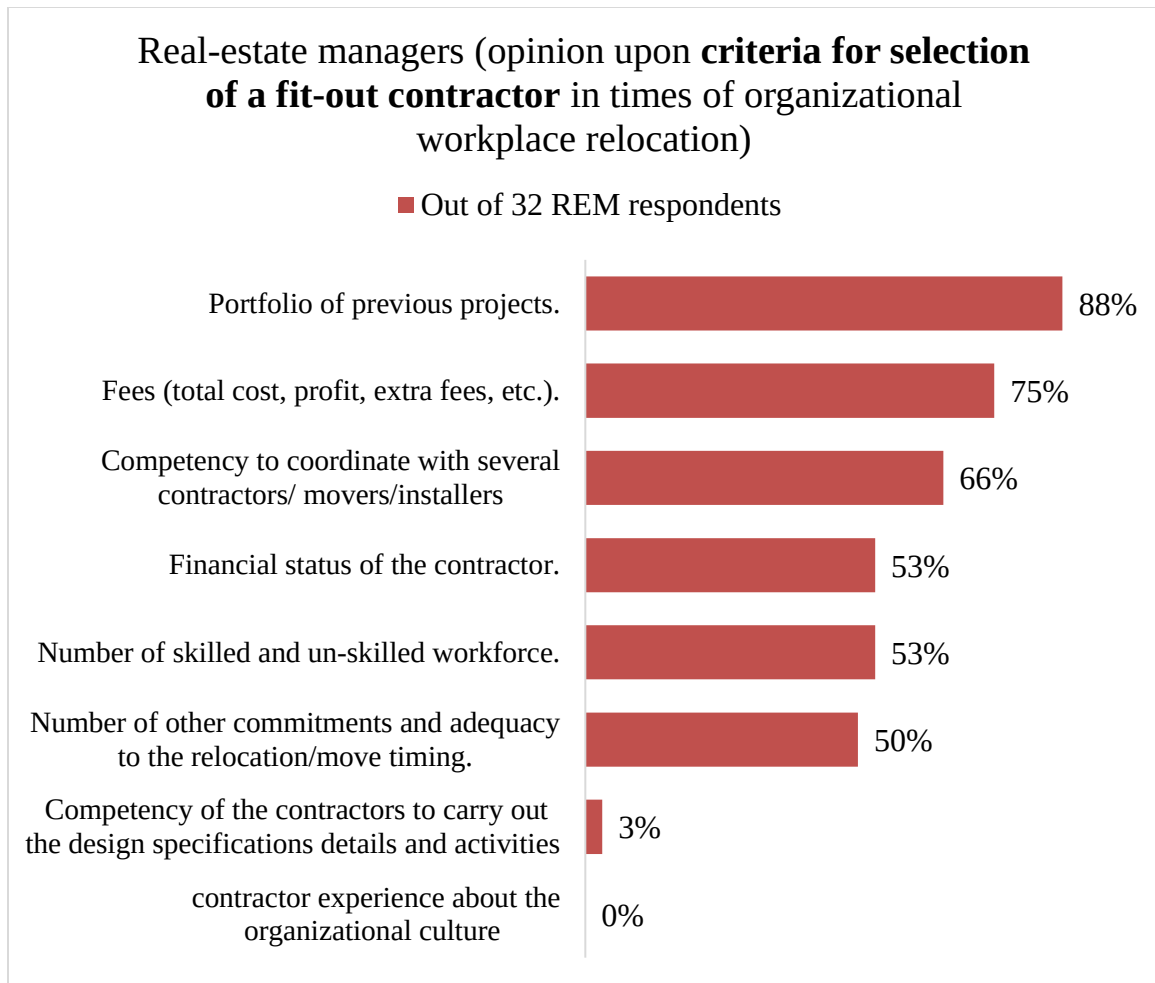


Figure 19 - Real-estate managers (opinion upon criteria for selection of a fit-out contractor in times of organizational workplace relocation)

4.3.13. Facilities managers opinion upon functional considerations in times of organizational workplace relocation

The facility managers respondents' group were asked to identify the most important functional considerations of workplace in times of organizational workplace relocation in Saudi Arabia; (25 out of 32) 78% agreed on 'Space layout due to departmental adjacencies'. Where, (24 out of 32) 75% agreed that 'arrangement & availability of meeting rooms, collaborative work areas', (24 out of 32) 75% agreed upon 'Type of space layout

(open plan offices, closed offices, activity-based layout)', (22 out of 32) 69% agreed on 'availability of storage and archiving space', (21 out of 32) 66% agreed on 'Privacy and public zoning of spaces', (20 out of 32) 63% agreed on 'Availability of communal facilities (e.g. break rooms, restaurant, etc.) all to be functional considerations of workplace in times of organizational relocation in Saudi Arabia. Where a respondent indicated that "It differs based on the business needs e.g. one of the requirements could be a customer interface space. Also, it is important to ensure facility flexibility". Another respondent indicated that "provision for data center, communication rooms, electrical and mechanical rooms".

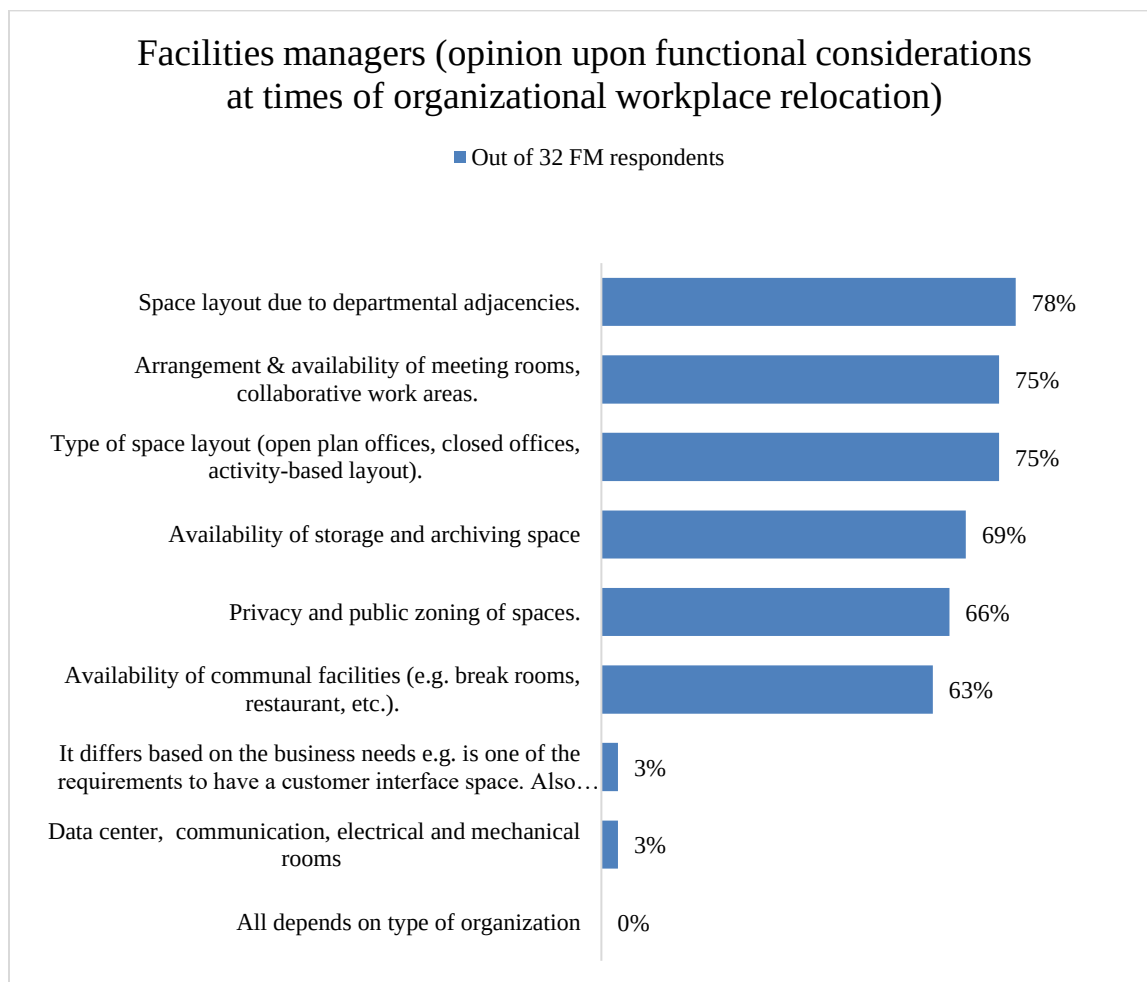


Figure 20 - Facilities managers (opinion upon functional considerations at times of organizational workplace relocation)

4.3.14. Real-estate managers opinion upon functional considerations in times of organizational workplace relocation

The real-estate managers respondents' group were asked to identify the most important functional considerations of workplace in times of organizational workplace relocation in Saudi Arabia; (27 out of 32) 84% agreed on 'Privacy and public zoning of spaces'. Where, (26 out of 32) 81% agreed on 'Type of space layout (open plan offices, closed offices, activity-based layout)', (24 out of 32) 75% agreed on 'Arrangement & availability of meeting rooms, collaborative work areas', (24 out of 32) 75% agreed on 'Availability of communal facilities (e.g. break rooms, restaurant, etc.)', (24 out of 32) 75% agreed on 'Availability of storage and archiving space', (23 out of 32) 72% agreed on 'Space layout due to departmental adjacencies', (1 out of 32) 3% a respondent agreed that its 'All dependent on type of organization' as a functional consideration of workplace in times of organizational relocation in Saudi Arabia. As illustrated in figure 21.

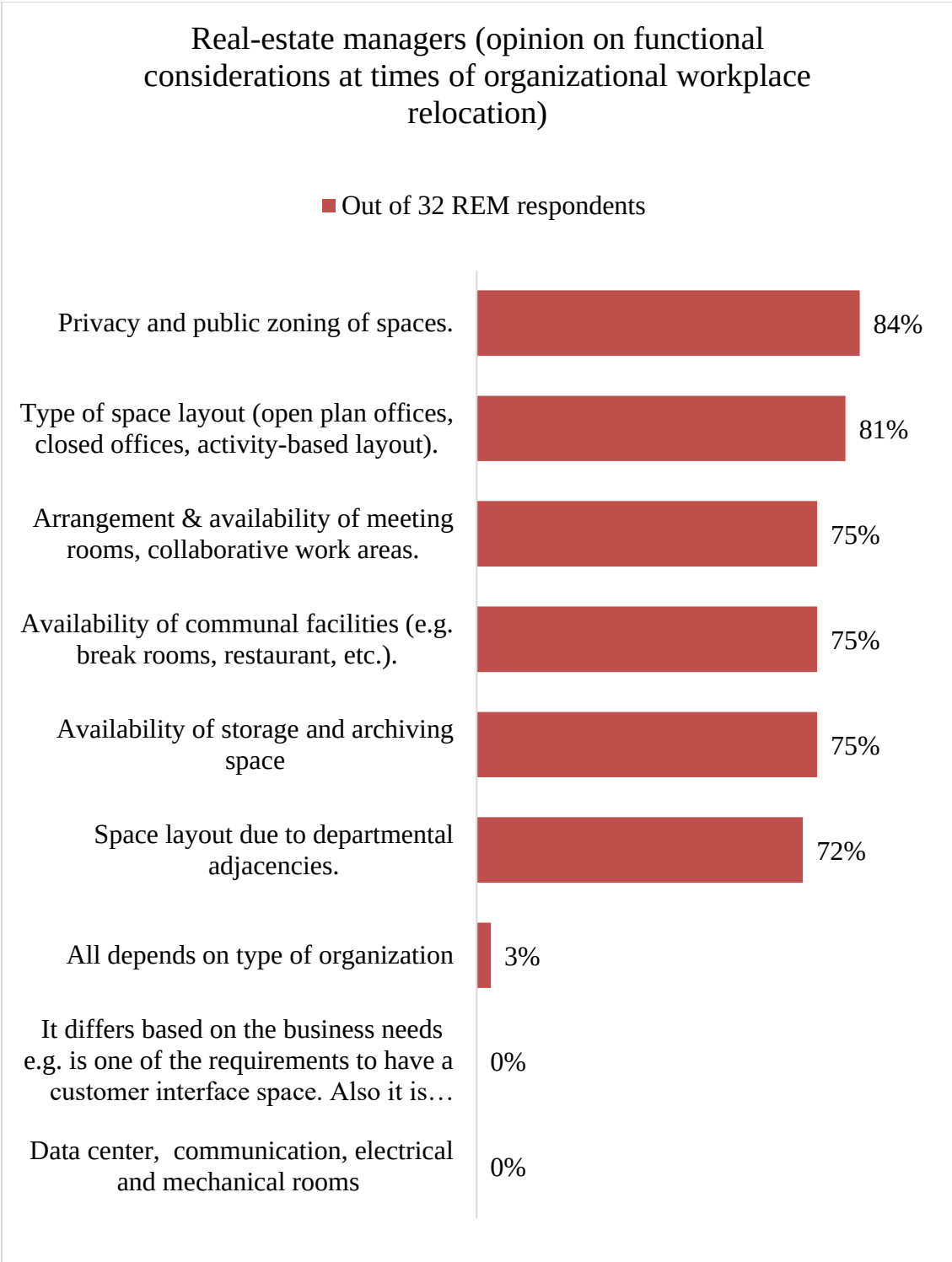


Figure 21 - Real-estate managers (opinion on functional considerations at times of organizational workplace relocation)

4.3.15. Facilities managers opinion upon technical considerations in times of organizational workplace relocation

The facilities managers respondents' group were asked to identify the most important technical considerations of workplace in times of organizational workplace relocation in Saudi Arabia; (27 out of 32) 84% agreed on 'Ease of cleaning and maintenance'. Where, (22 out of 32) 69% agreed on 'Ergonomics of design of furniture and workplace facility', ((22 out of 32) 69% agreed on 'Compliance with codes and standards', (21 out of 32) 66% agreed on 'Adequate aesthetics for the workplace', (20 out of 32) 63% agreed on 'Adequate usage of computers, mobile devices, printing and scanning and technology', (20 out of 32) 63% agreed on 'Adequate use of communication tools (*e.g.* IP telephony, high speed internet, audio visual systems, etc.)', (20 out of 32) 63% agreed on 'Adequate performance of indoor environmental quality (thermal, visual and acoustical means of comfort)', (16 out of 32) 50% agreed on 'Adequate use for wayfinding and signage systems', (1 out of 32) 3% agreed on 'Adequate vertical transportation system' all to be technical considerations of workplace in times of organizational workplace relocation in Saudi Arabia. As illustrated in figure 22.

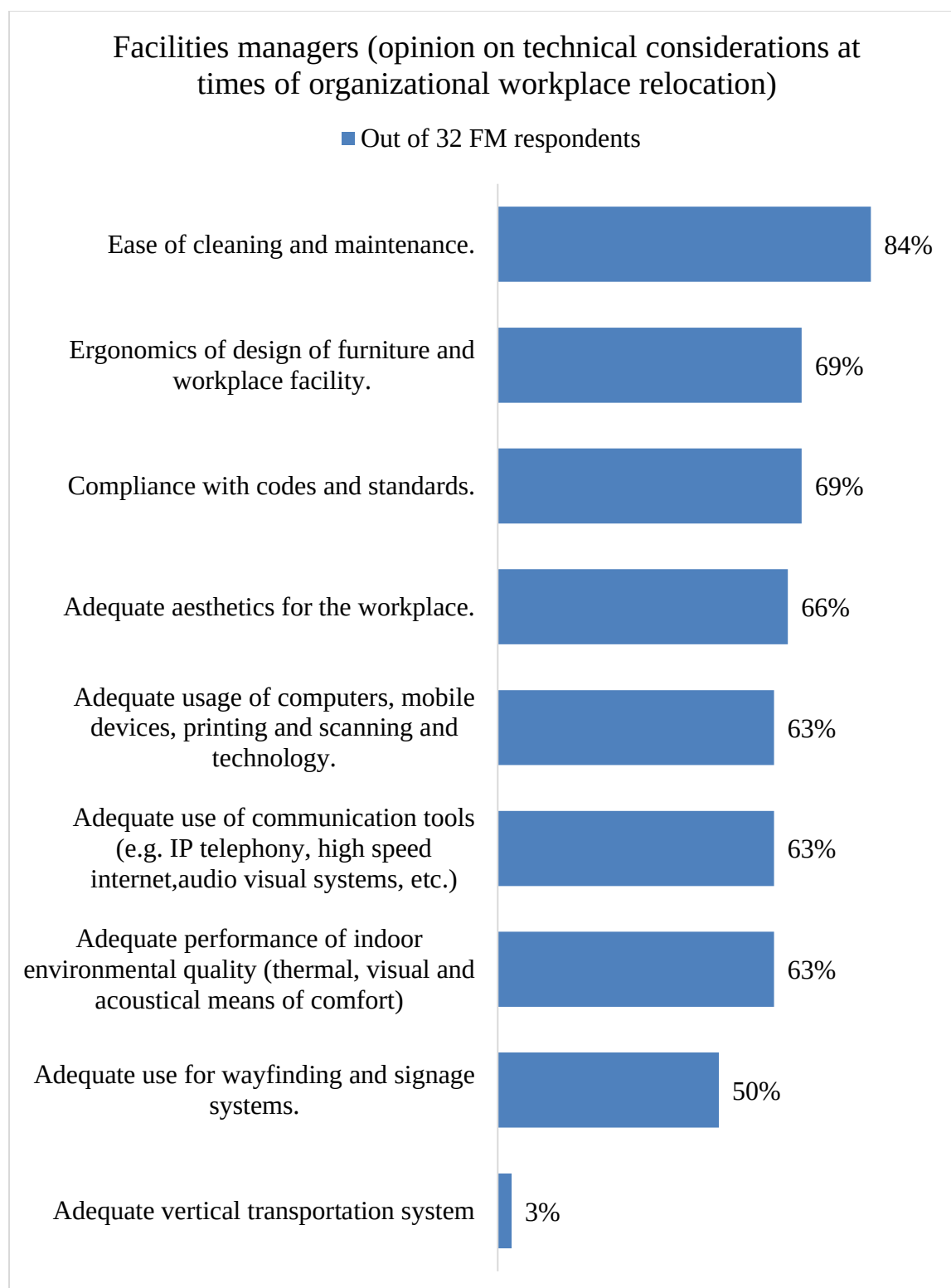


Figure 22 - Facilities managers (opinion on technical considerations at times of organizational workplace relocation)

4.3.16. Real-estate managers opinion upon technical considerations in times of organizational workplace relocation

The real-estate managers respondents' group were asked to identify the most important technical considerations of workplace in times of organizational workplace relocation in Saudi Arabia; (26 out of 32) 81% agreed on 'Compliance with codes and standards'. Where, (25 out of 32) 78% agreed on 'Ease of cleaning and maintenance', (24 out of 32) 75% agreed on 'Adequate use of communication tools (*e.g.* IP telephony, high speed internet, audio visual systems, etc.)', (23 out of 32) 72% agreed on Adequate usage of computers, mobile devices, printing and scanning and technology', (21 out of 32) 66% agreed on 'Ergonomics of design of furniture and workplace facility', (21 out of 32) 66% agreed on 'Adequate performance of indoor environmental quality (thermal, visual and acoustical means of comfort)', (17 out of 32) 53% agreed on 'Adequate aesthetics for the workplace', (16 out of 32) 50% agreed on Adequate use for wayfinding and signage systems' all as technical considerations for the workplace in times of organizational relocation in Saudi Arabia. Where, all respondents did not highlight the consideration of an 'adequate vertical transportation system' as a technical consideration for organizational relocation in Saudi Arabia. As illustrated in figure 23.

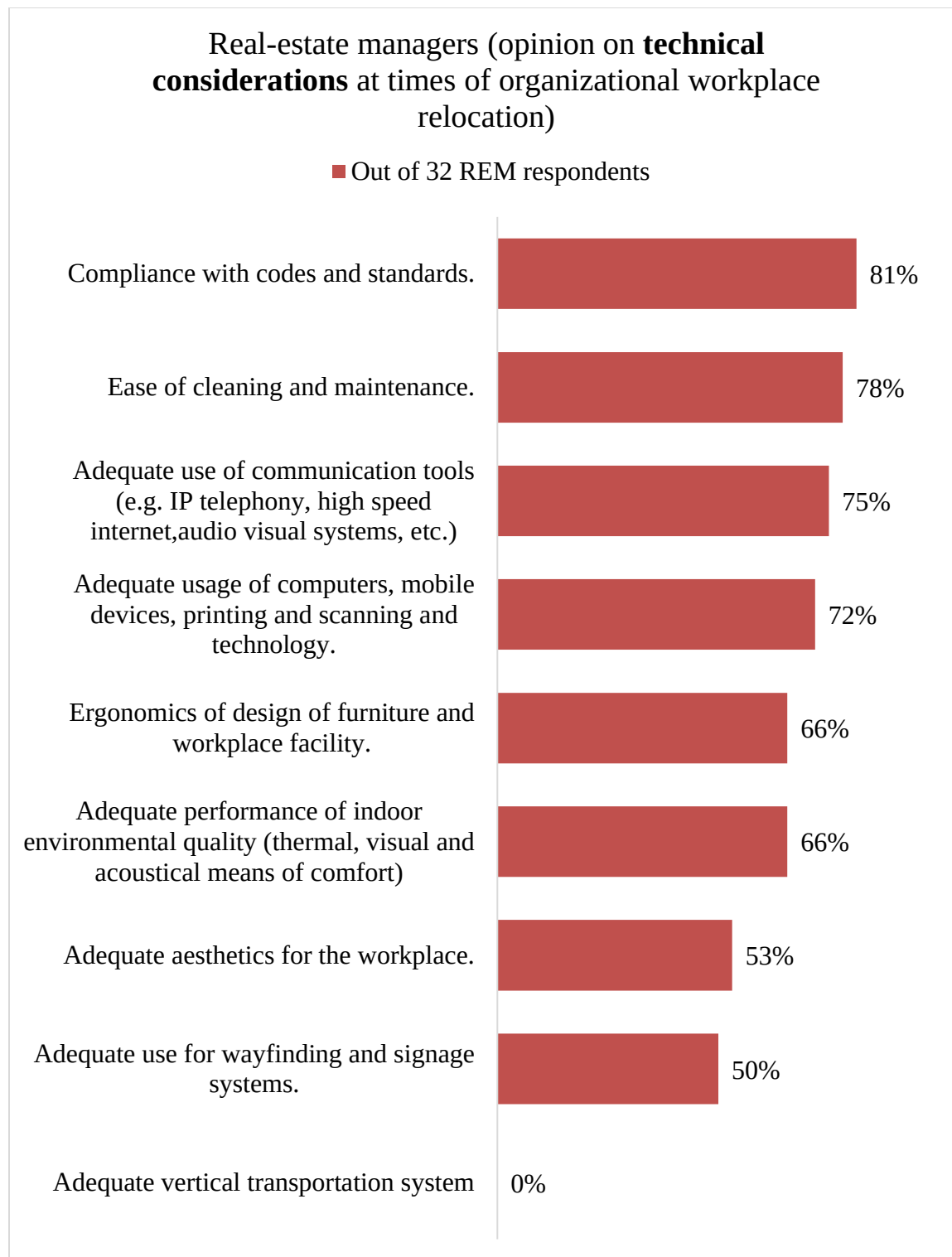


Figure 23 - Real-estate managers (opinion on technical considerations at times of organizational workplace relocation)

4.4 CALCULATION OF IMPORTANCE INDEX FOR ASSESSMENT OF THE FACTORS AFFECTING THE PROCESS OF ORGANIZATIONAL WORKPLACE RELOCATION

The assessment of the thirty-four factors identified, that affect the three phases of organizational workplace relocation, was implemented using five points Likert scale (to identify their level of importance), namely: ‘Extremely Important’, ‘Very Important’, ‘Important’, ‘Somewhat Important’ and ‘Not Important’. The respondents’ were asked to indicate each factor’s level of importance. The received responses from each respondent group (facilities managers and real estate managers) were analyzed separately. The two separate groups’ of data were entered and analyzed using Microsoft Excel. As in (Equation 1.3), in chapter one, the responses data was then used to calculate the importance Index for each factor. Then the importance Indices were classified into levels of importance, based on the specific ranges described in chapter one.

4.4.1. Factors assessment and calculation of importance index for the facilities managers responses

4.4.1.1. For the pre-relocation phase

The facilities managers respondents’ group average rate of importance for the ‘pre-relocation phase’-(A) is ‘Very Important’ with (79.6%) average index of importance; it is rank found to be third in compare to other two phases of relocation : the ‘relocation phase’ and the ‘post-relocation phase’.

Where, the respondents rated the factor (A1) ‘Analysis of business needs for relocation’ as ‘Very Important’ with (85.2%) index of importance; its rank among all factors affecting the organizational workplace relocation is thirteenth. For, (A2) ‘Organizational culture & image requirements’ rated as ‘Very Important’ with (74.2%) index of importance; its rank among all factors is thirty first. For, (A3) ‘Condition of existing assets’ relocation’ rated as ‘Very Important’ with (76.6%) index of importance; its rank among all factors is twenty seventh. For, (A4) ‘Employee’s needs (economic, social and environmental)’ rated as ‘Very Important’ with (72.7%) index of importance; its rank among all factors is thirty second. For, (A5) ‘Functional workplace needs (*e.g.* adjacency between departments, public and private areas zoning, availability of meeting rooms etc.)’ rated as ‘Very Important’ with (84.4%) index of importance; its rank among all factors is fourteenth. For, (A6) ‘Technical workplace needs (*e.g.* health and safety, wayfinding, signage and IT *etc.*)’ rated as ‘Very Important’ with (84.4%) index of importance; its rank among all factors is fourteenth. For, (A7) ‘Location of new premises’ rated as ‘Very Important’ with (78.9%) index of importance; its rank among all factors is twenty fifth. For, (A8) ‘Proximity aspects to amenities’ rated as ‘Very Important’ with (67.2%) index of importance; its rank among all factors is thirty fourth. For, (A9) ‘Assessment of skeletal characteristics of the new premises’ rated as ‘Very Important’ with (72.2%) index of importance; its rank among all factors is thirty second. For, (A10) ‘Assessment of building services characteristics of the new premises’ rated as ‘Very Important’ with (81.3%) index of importance; its rank among all factors is twenty first. For, (A11) ‘Flexibility /

adaptability at new premises’ rated as ‘Very Important’ with (82.0%) index of importance; its rank among all factors is eighteenth. For, (A12) ‘Sustainability measures at the new premises’ rated as ‘Very Important’ with (75.0%) index of importance; its rank among all factors is twenty ninth. For, (A13) ‘O&M requirements for the new premises’ rated as ‘Extremely Important’ with (91.4%) index of importance; its rank among all factors is second. For, (A14) ‘Development of relocation plan & schedule’ rated as ‘Very Important’ with (82.8%) index of importance; its rank among all factors is seventeenth. For, (A.15) ‘Formation of divisions’ move teams’ rated as ‘Very Important’ with (78.1%) index of importance; its rank among all factors is twenty sixth. For, (A.16) ‘Allocated budget for relocation’ rated as ‘Extremely Important’ with (87.5%) index of importance; its rank among all factors is Seventh.

4.4.1.2. For the relocation phase

The facilities managers respondents’ group average rate of importance for the ‘relocation phase’-(B) is ‘Very Important’ with (83.8%) average index of importance; it is rank found to be second in compare to other two phases of relocation : the ‘pre-relocation phase’ and the ‘post-relocation phase’.

Where, the respondents rated the factor (B1) ‘Availability of accurate, coordinated and completeness of relocation plan and documents ‘as ‘Very Important’ with (85.9%) index of importance; its rank among all factors affecting the organizational workplace relocation is eleventh. For, (B.2) ‘Identifying means of access for relocation activities’ requirements’ rated as ‘Very Important’ with (79.7%) index of importance; its rank among all factors is twenty second. For, (B.3)

‘Identification and monitoring of safety measures during relocation’ requirements’ rated as ‘Very Important’ with (79.7%) index of importance; its rank among all factors is twenty second. For, (B.4) ‘Availability of quality management plan for the relocation process’ rated as ‘Very Important’ with (75.0%) index of importance; its rank among all factors is twenty ninth. For, (B.5) ‘Minimization of relocation interruptions’ rated as ‘Extremely Important’ with (85.9%) index of importance; its rank among all factors is sixth. For, (B.6) ‘Selection of movers’ rated as ‘Very Important’ with (85.9%) index of importance; its rank among all factors is eleventh. For, (B.7) ‘Selection of suppliers’ rated as ‘Very Important’ with (82.0%) index of importance; its rank among all factors is eighteenth. For, (B.8) ‘Selection of fit-out contractor’ rated as ‘Very Important’ with (79.7%) index of importance; its rank among all factors is twenty second. For, (B.9) ‘Time control & management of the relocation process’ rated as ‘Extremely Important’ with (89.8%) index of importance; its rank among all factors is fifth. For, (B.10) ‘Cost control & management of the relocation process’ rated as ‘Extremely Important’ with (91.4%) index of importance; its rank among all factors is second.

4.4.1.2.1. For the post-relocation phase

The facilities managers respondents’ group average rate of importance for the ‘post-relocation phase’-(C) is ‘Very Important’ with (85.9%) average index of importance; it is rank found to be first in compare to other two phases of relocation : the ‘pre-relocation phase’ and the ‘relocation phase’.

Where, the respondents rated the factor (C1) ‘Availability and adequacy of post relocation checklists’ as ‘Very Important’ with (83.6%) index of importance;

its rank among all factors affecting the organizational workplace relocation is sixteenth. For, (C.2) 'compliance of suppliers, movers, installers and contractors to relocation plan' rated as 'Very Important' with (86.7%) index of importance; its rank among all factors is ninth. For, (C.3) 'Satisfactory outputs of MEP systems' commissioning' rated as 'Very Important' with (86.7%) index of importance; its rank among all factors is ninth. For, (C.4) 'Availability of maintenance plans' rated as 'Extremely Important' with (90.6%) index of importance; its rank among all factors is fourth. For, (C.5) 'Availability of workplace health and safety plan' rated as 'Extremely Important' with (94.5%) index of importance; its rank among all factors is first. For, (C.6) 'Availability of orientation plans for the new premises' rated as 'Extremely Important' with (87.5%) index of importance; its rank among all factors is seventh. For, (C.7) 'Occupants satisfaction with new workplace premises' rated as 'Very Important' with (75.8%) index of importance; its rank among all factors is twenty eighth. For, (C.8) 'Availability of record keeping procedures' rated as 'Very Important' with (82.0%) index of importance; its rank among all factors is eighteenth.

4.4.2. Factors assessment and calculation of importance index for the real estate managers responses

4.4.2.1. For the pre-relocation phase

The real estate managers respondents group average rate of importance for the 'pre-relocation phase'-(A) is 'Very Important' with (75.3%) average index of

importance; it is rank found to be third in compare to other two phases of relocation : the ‘relocation phase’ and the ‘post-relocation phase’.

Where, the respondents rated the factor (A1) ‘Analysis of business needs for relocation’ as ‘Extremely Important’ with (91.4%) index of importance; its rank among all factors affecting the organizational workplace relocation is first. For, (A2) ‘Organizational culture & image requirements’ rated as ‘Very Important’ with (76.6%) index of importance; its rank among all factors is twenty fifth. For, (A3) ‘Condition of existing assets’ rated as ‘Very Important’ with (73.4%) index of importance; its rank among all factors is thirty sixth. For, (A4) ‘Employee’s needs (economic, social and environmental)’ rated as ‘Very Important’ with (67.2%) index of importance; its rank among all factors is thirty third. For, (A5) ‘Functional workplace needs (e.g. Adjacency between departments, public and private areas zoning, availability of meeting rooms etc.)’ rated as ‘Very Important’ with (77.3%) index of importance; its rank among all factors is twenty second. For, (A6) ‘Technical workplace needs (e.g. health and safety, wayfinding, signage and IT etc.)’ rated as ‘Very Important’ with (82.0%) index of importance; its rank among all factors is eleventh. For, (A7) ‘Location of new premises’ rated as ‘Very Important’ with (85.2%) index of importance; its rank among all factors is fifth. For, (A8) ‘Proximity aspects to amenities’ rated as ‘Very Important’ with (68.8%) index of importance; its rank among all factors is twenty ninth. For, (A9) ‘Assessment of skeletal characteristics of the new premises’ rated as ‘Very Important’ with (68.8%) index of importance; its rank among all factors is twenty ninth. For, (A10) ‘Assessment of building services characteristics of the new

premises' rated as 'Very Important' with (78.9%) index of importance; its rank among all factors is nineteenth. For, (A11) 'Flexibility / adaptability at new premises' rated as 'Very Important' with (71.9%) index of importance; its rank among all factors is twenty seventh. For, (A12) 'Sustainability measures at the new premises' rated as 'Very Important' with (53.1%) index of importance; its rank among all factors is thirty fourth. For, (A13) 'O&M requirements for the new premises' rated as 'Very Important' with (77.3%) index of importance; its rank among all factors is twenty second. For, (A14) 'Development of relocation plan & schedule' rated as 'Very Important' with (77.3%) index of importance; its rank among all factors is twenty second. For, (A.15) 'Formation of divisions' move teams' rated as 'Very Important' with (68.0%) index of importance; its rank among all factors is thirty second. For, (A.16) 'Allocated budget for relocation' rated as 'Extremely Important' with (88.3%) index of importance; its rank among all factors is second.

4.4.2.2. For the relocation phase

The real estate managers respondents group average rate of importance for the 'relocation phase'-(B) is 'Very Important' with (82.2%) average index of importance; it is rank found to be first in compare to other two phases of relocation: the 'pre-relocation phase' and the 'post-relocation phase'.

Where, the respondents rated the factor (B1) 'Availability of accurate, coordinated and completeness of relocation plan and documents' as 'Very Important' with (84.4%) index of importance; its rank among all factors affecting the organizational workplace relocation is eighth. For, (B.2) 'Identifying means of

access for relocation activities’ rated as ‘Very Important’ with (79.7%) index of importance; its rank among all factors is eighteenth. For, (B.3) ‘Identification and monitoring of safety measures during relocation’ rated as ‘Very Important’ with (81.3%) index of importance; its rank among all factors is fourteenth. For, (B.4) ‘Availability of quality management plan for the relocation process’ rated as ‘Very Important’ with (68.8%) index of importance; its rank among all factors is twenty ninth. For, (B.5) ‘Minimization of relocation interruptions’ rated as ‘Very Important’ with (81.3%) index of importance; its rank among all factors is fourteenth. For, (B.6) ‘Selection of movers’ rated as ‘Very Important’ with (82.0%) index of importance; its rank among all factors is eleventh. For, (B.7) ‘Selection of suppliers’ rated as ‘Very Important’ with (85.2%) index of importance; its rank among all factors is fifth. For, (B.8) ‘Selection of fit-out contractor’ rated as ‘Extremely Important’ with (87.5%) index of importance; its rank among all factors is fourth. For, (B.9) ‘Time control & management of the relocation process’ rated as ‘Very Important’ with (83.6%) index of importance; its rank among all factors is ninth. For, (B.10) ‘Cost control & management of the relocation process’ rated as ‘Extremely Important’ with (88.3%) index of importance; its rank among all factors is second.

4.4.2.3. For the post-relocation phase

The real estate managers respondents’ group average rate of importance for the ‘post-relocation phase’-(C) is ‘Very Important’ with (79.9%) average index of importance; it is rank found to be second in compare to other two phases of relocation : the ‘pre-relocation phase’ and the ‘relocation phase’.

Where, the respondents rated the factor (C.1) ‘Availability & adequacy of post relocation checklists’ as ‘Very Important’ with (82.0%) index of importance; its rank among all factors affecting the organizational workplace relocation is eleventh. For, (C.2) ‘compliance of suppliers/ movers/ installers / contractors to relocation plan’ rated as ‘Very Important’ with (81.3%) index of importance; its rank among all factors is fourteenth. For, (C.3) ‘Satisfactory outputs of MEP systems’ commissioning’ rated as ‘Very Important’ with (83.6%) index of importance; its rank among all factors is ninth. For, (C.4) ‘Availability of maintenance plans’ rated as ‘Very Important’ with (78.1%) index of importance; its rank among all factors is twentieth. For, (C.5) ‘Availability of workplace health and safety plan’ rated as ‘Very Important’ with (82.0%) index of importance; its rank among all factors is eighteenth. For, (C.6) ‘Availability of orientation plans for the new premises’ rated as ‘Very Important’ with (69.5%) index of importance; its rank among all factors is twenty eighth. For, (C.7) ‘Occupants satisfaction with new workplace premises’ rated as ‘Very Important’ with (78.1%) index of importance; its rank among all factors is twentieth. For, (C.8) ‘Availability of record keeping procedures’ rated as ‘Very Important’ with (81.3%) index of importance; its rank among all factors is fourteenth.

Factor ID	Factor description	Importance Index (RII)	Rate of Importance	FMers RANK	Imp. Index (RII)	Rate of Importance	REMers RANK
A	Pre-relocation phase	79.6%	VI.	3	75.3%	VI.	3
A1.	Analysis of business needs for relocation	85.2%	VI.	13	91.4%	EI	1
A2.	Organizational culture & image requirements	74.2%	VI.	31	76.6%	VI.	25
A3.	Condition of existing assets	76.6%	VI.	27	73.4%	VI.	26
A4.	Employee's needs	72.7%	VI.	32	67.2%	VI.	33
A5.	Functional workplace needs (<i>e.g.</i> Adjacency between departments, public and private areas zoning, availability of meeting rooms <i>etc.</i>)	84.4%	VI.	14	77.3%	VI.	22
A6.	Technical workplace needs (<i>e.g.</i> health and safety, wayfinding, signage and IT <i>etc.</i>)	84.4%	VI.	14	82.0%	VI.	11
A7.	Location of the new premises	78.9%	VI.	25	85.2%	VI.	5
A8.	Proximity aspects to amenities	67.2%	VI.	34	68.8%	VI.	29
A9.	Assessment of skeletal characteristics of the new premises	72.7%	VI.	32	68.8%	VI.	29
A10.	Assessment of building services characteristics of the new premises	81.3%	VI.	21	78.9%	VI.	19
A11.	Flexibility and adaptability at new premises	82.0%	VI.	18	71.9%	VI.	27
A12.	Sustainability measures at the new premises	75.0%	VI.	29	53.1%	I	34
A13.	Operation and maintenance (O&M) requirements for the new premises	91.4%	EI	2	77.3%	VI.	22
A14.	Development of relocation plan & schedule	82.8%	VI.	17	77.3%	VI.	22
A.15	Formation of divisions' move teams	78.1%	VI.	26	68.0%	VI.	32
A.16	Allocated budget for relocation	87.5%	EI	7	88.3%	EI	2

Table 18 - Factors assessment and calculation of importance index based on the facilities managers' and real-estate managers' responses, the (pre-relocation phase)

Factor ID	Factor description	Importance Index(RII)	Rate of Importance	FMers RANK	Imp. Index(RII)	Rate of Importance	REMers RANK
B	Relocation phase	83.8%	VI.	2	82.2%	VI.	1
B.1	Availability of accurate, coordinated and completeness of relocation plan and documents	85.9%	VI.	11	84.4%	VI.	8
B.2	Identifying means of access for relocation activities	79.7%	VI.	22	79.7%	VI.	18
B.3	Identification and monitoring of safety measures during relocation	79.7%	VI.	22	81.3%	VI.	14
B.4	Availability of quality management plan for the relocation process	75.0%	VI.	29	68.8%	VI.	29
B.5	Minimization of relocation interruptions	88.3%	EI	6	81.3%	VI.	14
B.6	Selection of movers	85.9%	VI.	11	82.0%	VI.	11
B.7	Selection of suppliers	82.0%	VI.	18	85.2%	VI.	5
B.8	Selection of fit-out contractor	79.7%	VI.	22	87.5%	EI	4
B.9	Time control and management of the relocation process	89.8%	EI	5	83.6%	VI.	9
B.10	Cost control and management of the relocation process	91.4%	EI	2	88.3%	EI	2

Table 19 - Factors assessment and calculation of importance index based on the facilities managers' and real-estate managers' responses, the (relocation phase)

Factor ID	Factor Description	Importance Index(RII)	Rate of Importance	FMers RANK	Imp. Index(RII)	Rate of Importance	REMerS RANK
C	Post-Relocation Phase	85.9%	VI.	1	79.9%	VI.	2
C.1	Availability and adequacy of post relocation checklists	83.6%	VI.	16	82.0%	VI.	11
C.2	Compliance of suppliers, movers, installers and contractors to relocation plan	86.7%	VI.	9	81.3%	VI.	14
C.3	Satisfactory outputs of MEP systems' commissioning	86.7%	VI.	9	83.6%	VI.	9
C.4	Availability of maintenance plans	90.6%	EI	4	78.1%	VI.	20
C.5	Availability of workplace health and safety plan	94.5%	EI	1	85.2%	VI.	5
C.6	Availability of orientation plans for the new premises	87.5%	EI	7	69.5%	VI.	28
C.7	Occupants satisfaction with new workplace premises	75.8%	VI.	28	78.1%	VI.	20
C.8	Availability of record keeping procedures	82.0%	VI.	18	81.3%	VI.	14

Table 20 - Factors assessment and calculation of importance index based on the facilities managers' and real-estate managers' responses, the (post-relocation phase)

4.5 TEST OF AGREEMENT BETWEEN FACILITIES MANAGERS AND REAL-ESTATE MANAGERS

The test of agreements among the respondents facilities managers and real estate managers was conducted using the “**Rank-order coefficient of correlation**” formula:

$$p = 1 - \frac{6\sum D^2}{N(N^2-1)} \dots\dots\dots (1.4)$$

Where:

p = is the rank order coefficient of correlation.

$\sum D^2$ = is the sum of the squared differences in ranks of the paired values.

N = is the number of parameters for which the ranking is made (34 in this study).

The formula for p includes $\frac{6\sum D^2}{N(N^2-1)}$ which is subtracted from one. The result of

p will determine the level of agreements, between the two parties, involved in the analyzed calculations. The facilities managers and real estate managers; the resulted p is calculated to be **(0.5737)**. The result showed a moderate level of agreement between the respondents opinions (the facilities managers and the real estate managers). Both respondents (the facilities managers and the real estate managers) data of factors rankings were then inserted into the **SPSS** program to confirm upon the calculation of correlation, and the result of the calculated p is found to be **(0.577)** which is similar to the correlation calculated using the MS Excel program.

SPSS Correlation result			
		Rank1	Rank2
Rank1	Spearman's correlation	1	.577**
	Sig. (2-tailed)		.000
	N	34	34
Rank2	Spearman's correlation	.577**	1
	Sig. (2-tailed)	.000	
	N	34	34

** . Correlation is significant at the 0.01 level (2-tailed).

Table 21 - Test of agreement between facilities managers and real estate managers responses (result calculated by the use of SPSS software)

4.6 FACTORS ASSESSMENT AND CALCULATION OF IMPORTANCE INDEX FOR THE FACILITIES MANAGERS AND REAL ESTATE MANAGERS, A COMBINED RESPONSE ANALYSIS

Then, the analysis of importance is implemented upon the combined groups of respondents (the facilities managers and real estate managers), their responses over the three phases of organizational workplace relocation namely: the 'pre-relocation phase', the 'relocation phase' and the 'post-relocation phase'. Then the importance Indices were categorized into levels of importance based on specific ranges as described in chapter one.

4.6.1. For the pre-relocation phase

The combined respondents group (facilities managers and real estate managers) average rate of importance for the 'pre-relocation phase'-(A) is 'Very Important' with (77%) average index of importance; it is rank found to be third in

compare to other two phases of relocation : the ‘relocation phase’ and the ‘post-relocation phase’.

Where, the respondents rated the factor For, (A1) ‘Analysis of business needs for relocation as ‘Extremely Important’ with (88.3%) index of importance; its rank among all factors affecting the organizational workplace relocation is third. For, (A2) ‘Organizational culture & image requirements rated as ‘Very Important’ with (75.4%) index of importance; its rank among all factors is twenty Seventh. For, (A3) ‘Condition of existing assets’ rated as ‘Very Important’ with (75.0%) index of importance; its rank among all factors is twenty eighth. For, (A4) ‘Employee’s needs (economic, social and environmental)’ rated as ‘Very Important’ with (69.9%) index of importance; its rank among all factors is thirty second. For, (A5) ‘Functional workplace needs (e.g. adjacency between departments, public and private areas zoning, availability of meeting rooms etc.)’ rated as ‘Very Important’ with (80.9%) index of importance; its rank among all factors is nineteenth. For, (A6) ‘Technical workplace needs (e.g. health and safety, wayfinding, signage and IT etc.) ’ rated as ‘Very Important’ with (83.2%) index of importance; its rank among all factors is fifteenth. For, (A7) ‘Location of new premises’ rated as ‘Very Important’ with (82.0%) index of importance; its rank among all factors is seventeenth. For, (A8) ‘Proximity aspects to amenities’ rated as ‘Very Important’ with (68.0%) index of importance; its rank among all factors is thirty third. For, (A9) ‘Assessment of skeletal characteristics of the new premises’ rated as ‘Very Important’ with (70.7%) index of importance; its rank among all factors is thirty first. For, (A10) ‘Assessment of building services

characteristics of the new premises’ rated as ‘Very Important’ with (80.1%) index of importance; its rank among all factors is twenty fifth. For, (A11) ‘Flexibility / adaptability at new premises’ rated as ‘Very Important’ with (77.0%) index of importance; its rank among all factors is twenty fifth. For, (A12) ‘Sustainability measures at the new premises’ rated as ‘Very Important’ with (64.1%) index of importance; its rank among all factors is thirty fourth. For, (A13) ‘O&M requirements for the new premises’ rated as ‘Very Important’ with (84.4%) index of importance; its rank among all factors is ninth. For, (A14) ‘Development of relocation plan & schedule’ rated as ‘Very Important’ with (80.1%) index of importance; its rank among all factors is twenty first. For, (A.15) ‘Formation of divisions’ move teams’ rated as ‘Very Important’ with (73.0%) index of importance; its rank among all factors is twenty ninth. For, (A.16) ‘Allocated budget for relocation’ rated as ‘Extremely Important’ with (87.9%) index of importance; its rank among all factors is fourth.

4.6.2. For the relocation phase

The combined respondents group (facilities managers and real estate managers) average rate of importance for the ‘relocation phase’-(B) is ‘Very Important’ with (83%) average index of importance; it is rank found to be first in compare to other two phases of relocation : the ‘pre-relocation phase’ and the ‘post-relocation phase’.

Where, the respondents rated the factor (B.1) ‘Availability of accurate, coordinated and completeness of relocation plan and documents’ as ‘Very

Important’ with (85.2%) index of importance; its rank among all factors affecting the organizational workplace relocation is sixth. For, (B.2) ‘Identifying means of access for relocation activities’ rated as ‘Very Important’ with (79.7%) index of importance; its rank among all factors is twenty third. For, (B.3) ‘Identification and monitoring of safety measures during relocation’ rated as ‘Very Important’ with (80.5%) index of importance; its rank among all factors is twenty twentieth. For, (B.4) ‘Availability of quality management plan for the relocation process’ rated as ‘Very Important’ with (71.9%) index of importance; its rank among all factors is thirtieth. For, (B.5) ‘Minimization of relocation interruptions’ rated as ‘Very Important’ with (84.8%) index of importance; its rank among all factors is eighth. For, (B.6) ‘Selection of movers’ rated as ‘Very Important’ with (84.0%) index of importance; its rank among all factors is eleventh. For, (B.7) ‘Selection of suppliers’ rated as ‘Very Important’ with (83.6%) index of importance; its rank among all factors is thirteenth. For, (B.8) ‘Selection of fit-out contractor’ rated as ‘Very Important’ with (83.6%) index of importance; its rank among all factors is thirteenth. For, (B.9) ‘Time control & management of the relocation process’ rated as ‘Very Important’ with (86.7%) index of importance; its rank among all factors is fifth. For, (B.10) ‘Cost control & management of the relocation process’ rated as ‘Extremely Important’ with (89.8%) index of importance; its rank among all factors is first.

4.6.3. For the post-relocation phase

The combined respondents’ group (facilities managers and real estate managers) average rate of importance for the ‘post-relocation phase’-(C) is ‘Very

Important' with (83%) average index of importance; it is rank found to be second in compare to other two phases of relocation : the 'pre-relocation phase' and the 'relocation phase'.

Where, the respondents rated the factor (C.1) 'Availability & adequacy of post relocation checklists' rated as 'Very Important' as 'Very Important' with (82.8%) index of importance; its rank among all factors affecting the organizational workplace relocation is sixteenth. For, (C.2) 'compliance of suppliers, movers, installers and contractors to relocation plan' rated as 'Very Important' with (84.0%) index of importance; its rank among all factors is eleventh. For, (C.3) 'Satisfactory outputs of MEP systems' commissioning' rated as 'Very Important' with (85.2%) index of importance; its rank among all factors is sixth. For, (C.4) 'Availability of maintenance plans' rated as 'Very Important' with (84.4%) index of importance; its rank among all factors is ninth. For, (C.5) 'Availability of workplace health and safety plan' rated as 'Extremely Important' with (89.8%) index of importance; its rank among all factors is first. For, (C.6) 'Availability of orientation plans for the new premises' rated as 'Very Important' with (78.5%) index of importance; its rank among all factors is twenty fourth. For, (C.7) 'Occupants satisfaction with new workplace premises' rated as 'Very Important' with (77.0%) index of importance; its rank among all factors is twenty fifth. For, (C.8) 'Availability of record keeping procedures' rated as 'Very Important' with (81.6%) index of importance; its rank among all factors is eighteenth.

Factor ID	Description	Combined Respondents (FM & REM)		Combined Rank
		Average Importance Index (AII)	Rate of Importance Index	
A	Pre-relocation phase	77%	VI.	3
A1.	Analysis of business needs for relocation	88.3%	EI	3.00
A2.	Organizational culture and image requirements	75.4%	VI.	27.00
A3.	Condition of existing assets	75.0%	VI.	28.00
A4.	Employee's needs (economic, social and environmental)	69.9%	VI.	32.00
A5.	Functional workplace needs (<i>e.g.</i> Adjacency between departments, public and private areas zoning, availability of meeting rooms etc.)	80.9%	VI.	19.00
A6.	Technical workplace needs (<i>e.g.</i> health and safety, wayfinding, signage and IT <i>etc.</i>)	83.2%	VI.	15.00
A7.	Location of new premises	82.0%	VI.	17.00
A8.	Proximity aspects to amenities	68.0%	VI.	33.00
A9.	Assessment of skeletal characteristics of the new premises	70.7%	VI.	31.00
A10.	Assessment of building services characteristics of the new premises	80.1%	VI.	21.00
A11.	Flexibility and adaptability at new premises	77.0%	VI.	25.00
A12.	Sustainability measures at the new premises	64.1%	VI.	34.00
A13.	O&M requirements for the new premises	84.4%	VI.	9.00
A14.	Development of relocation plan and schedule	80.1%	VI.	21.00
A.15	Formation of divisions' move teams	73.0%	VI.	29.00
A.16	Allocated budget for relocation	87.9%	EI	4.00

Table 22 - Factors assessment and calculation of importance index for the facilities managers and real estate managers combined responses (pre-relocation phase)

Factor ID	Description	Combined Respondents (FM & REM)		Combined Rank
		Average Importance Index (AII)	Rate of Importance Index	
B	Relocation phase	83%	VI.	1
B.1	Availability of accurate, coordinated and completeness of relocation plan and documents	85.2%	VI.	6.00
B.2	Identifying means of access for relocation activities	79.7%	VI.	23.00
B.3	Identification and monitoring of safety measures during relocation	80.5%	VI.	20.00
B.4	Availability of quality management plan for the relocation process	71.9%	VI.	30.00
B.5	Minimization of relocation interruptions	84.8%	VI.	8.00
B.6	Selection of movers	84.0%	VI.	11.00
B.7	Selection of suppliers	83.6%	VI.	13.00
B.8	Selection of fit-out contractor	83.6%	VI.	13.00
B.9	Time control and management of the relocation process	86.7%	VI.	5.00
B.10	Cost control and management of the relocation process	89.8%	EI	1.00

Table 23 - Factors assessment and calculation of importance index for the facilities managers and real estate managers combined responses (relocation phase)

Factor ID	Description	Combined Respondents (FM & REM)		Combined Rank
		Average Importance Index (AII)	Average Importance Index (AII)	
C	Post-relocation phase	83%	VI.	2
C.1	Availability & adequacy of post relocation checklists	82.8%	VI.	16.00
C.2	compliance of suppliers, movers, installers and contractors to relocation plan	84.0%	VI.	11.00
C.3	Satisfactory outputs of MEP systems' commissioning	85.2%	VI.	6.00
C.4	Availability of maintenance plans	84.4%	VI.	9.00
C.5	Availability of workplace health and safety plan	89.8%	EI	1.00
C.6	Availability of orientation plans for the new premises	78.5%	VI.	24.00
C.7	Occupants satisfaction with new workplace premises	77.0%	VI.	25.00
C.8	Availability of record keeping procedures	81.6%	VI.	18.00

Table 24 - Factors assessment and calculation of importance index for the facilities managers and real estate managers combined responses (post-relocation phase)

4.7 Discussion

In this chapter, the identified factors from literature affecting the phases of organizational workplace relocation were assessed using a questionnaire survey distributed to two groups of professionals (facilities managers and real estate managers). The importance of each of the factors was identified; then, a test of agreement between both groups of responses was calculated. The test of agreement between both groups was calculated using Spearman's equation of correlation and by utilizing MS Excel and SPSS programs. The calculated correlation value is found to be (0.577); indicating a moderate level of agreement between both groups. The comparison of findings from this assessment by comparing both groups' opinions is as shown in the following figures:

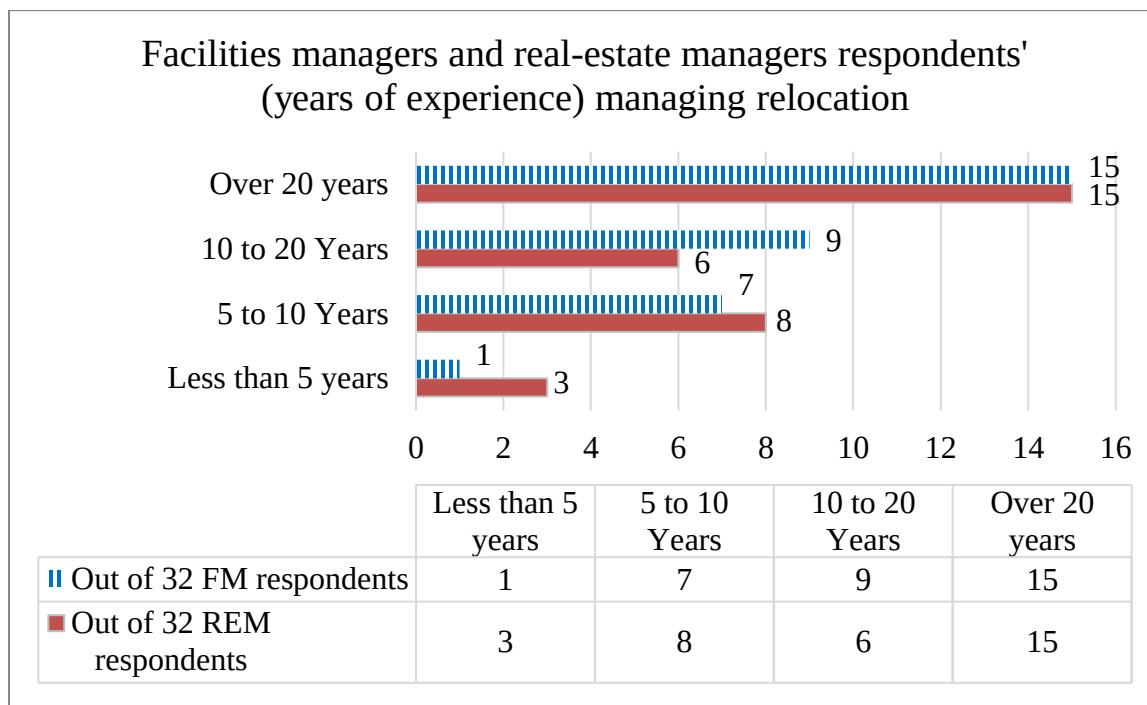


Figure 24 - Facilities managers and real-estate managers respondents' (years of experience) managing relocation.

Facilities managers have shown similar years of expertise with real-estate managers in response to a question for both professional, as shown in figure 24.

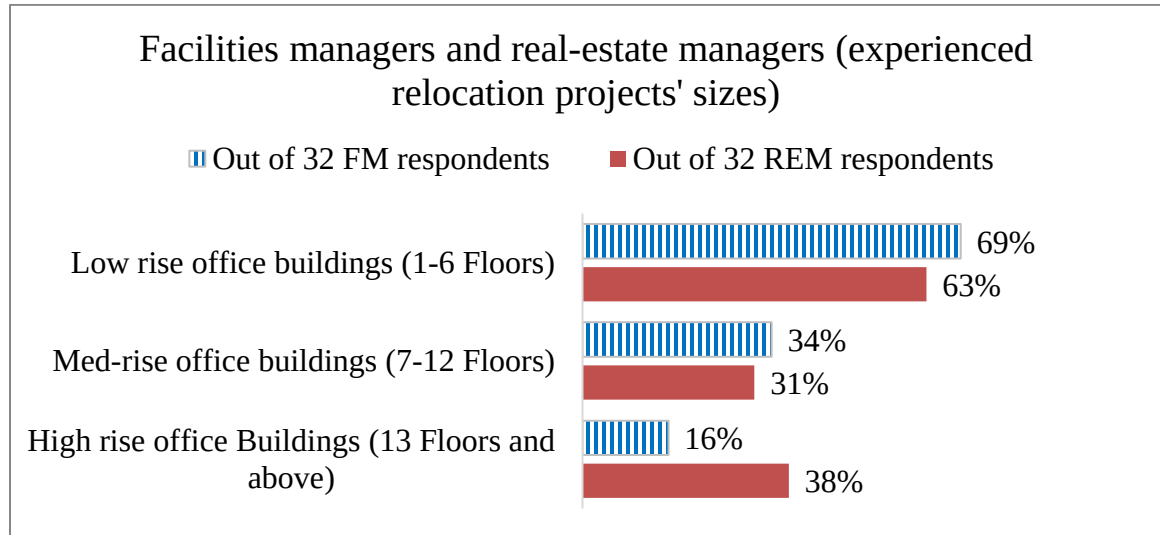


Figure 25 - Facilities managers and real-estate managers (experienced relocation projects' sizes)

The facilities managers shown a similar experienced relocation projects size with the real-estate managers, as shown in figure 25.

For the drivers of workplace relocation, the facilities managers indicated the following 5 drivers to be highest effectively causes for workplace relocation:

- Better use of workplace space and capacity.
- Downsizing or growth in number of employees.
- Seeking a better image for the organization (better workplace aesthetics).
- Centralizing and decentralizing organizational units or departments.
- Access to qualified talents and lower wages.

Where the real estate managers indicated that the most five driving factors for organizational workplace relocations are:

- Better use of workplace space and capacity.
- Seeking a better image for the organization (better workplace aesthetics).
- Centralizing and decentralizing organizational units or departments.
- Access to lower wages of talent.
- Gaining access to public transportation.

The difference in both perspectives findings is logic due to the observed interests of each group. The relation between both groups' opinions is shown in figure 26.

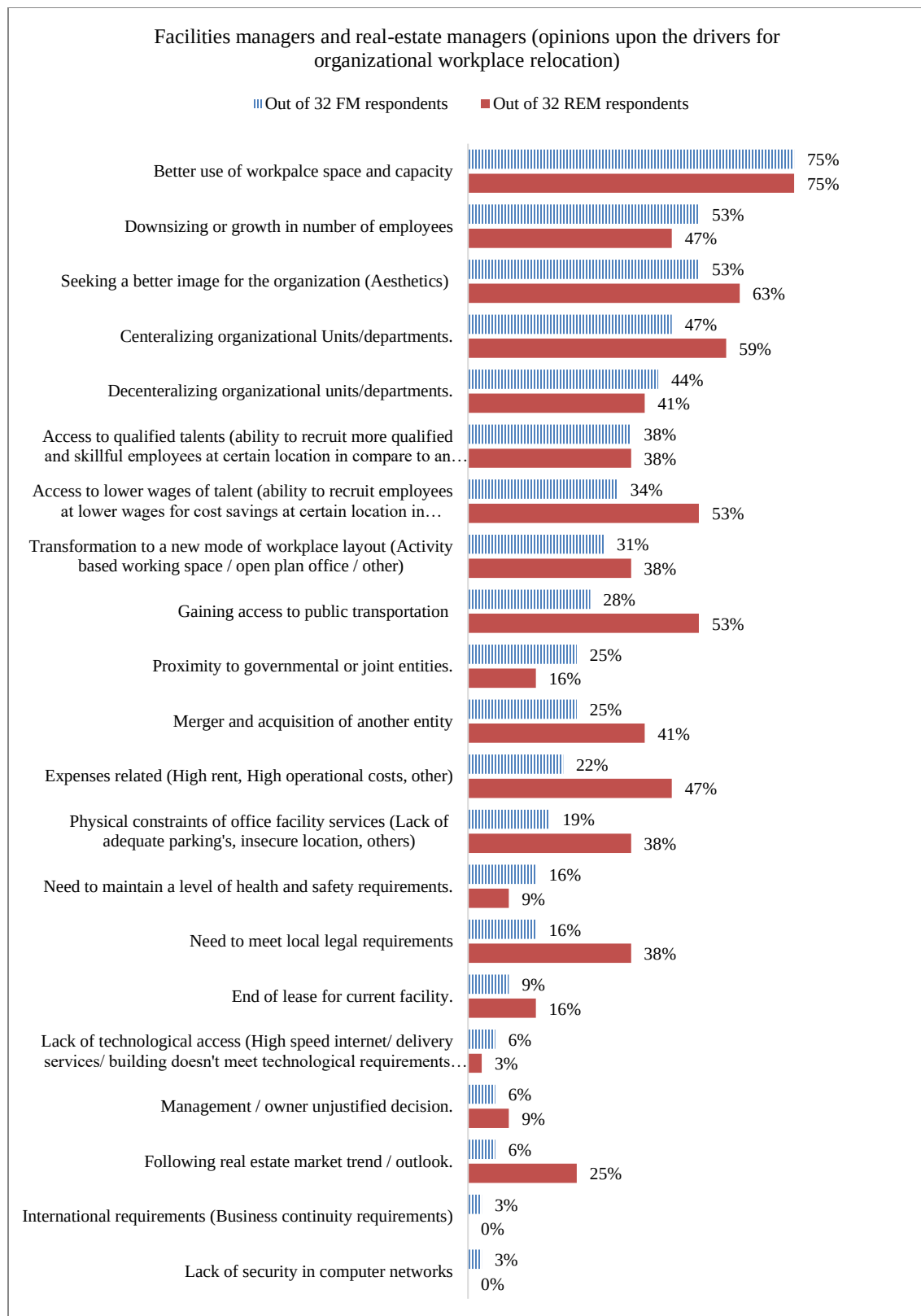


Figure 26 - Facilities managers and real-estate managers (opinions upon the drivers for organizational workplace relocation)

For the challenges facing organizations in times of workplace relocation, both groups were asked, the facilities managers indicated the 5 most challenging factors to be:

- Identification of business needs.
- Budgetary limitations and control over expenses.
- Business interruption and sense of urgency to relocate.
- Time allocated for planning the relocation.
- Design of the new workplace premises.

Where the real estate managers indicated the following 5 challenges to be the most stagnant in times of workplace relocations:

- Budgetary limitations and control over expenses.
- Time allocated for planning the relocation.
- Unavailability of complete, coordinated and well documented relocation plan.
- Negotiations with landlords upon (price, start of lease date, *etc.*).
- Business interruption and sense of urgency to relocate.

Further challenges are shown as well in Figure 27. The findings indicate that usually businesses do not have a clear expectation of the new premises and workplace design that may cause significant challenges managing time and cost of the relocation. Furtherly, the documentation of the relocation process is almost absent and requires more attention to be more systematic rather than being dependent on the organizational attachment to level of efforts and details in preparing the relocation plans. This unhealthy practice causes disputes and makes landlords more difficult to negotiate with as many organizations abuse the commitment with the property owners to take advantage of relocation times. Thus, a well-

documented relocation plan that identifies each of the parties' responsibilities would surely be a more mature practice to overcome the identified challenges. Also, organizations need to spend more time on the making before the move to minimize business disruptions and changes in workplace design and to ensure the new premises readiness and effectiveness.

In Fig. 28, the respondents were asked about the best scenario managing workplace relocation projects, facilities managers indicated that managing the relocation by an organizational facilities manager is the best scenario this could be due to his in-depth knowledge of the organizational requirements. Despite that real estate managers agreed slightly with the facilities managers opinions, but they indicated that outsourcing would be a more reliable option. This is logic for the benefit of the real estate managers as they want to be in a better position to offer options to organizations that might grant them a mutual benefit. This was referred to in literature that a third-party managing relocation may subject the organization toward some sort of bias.

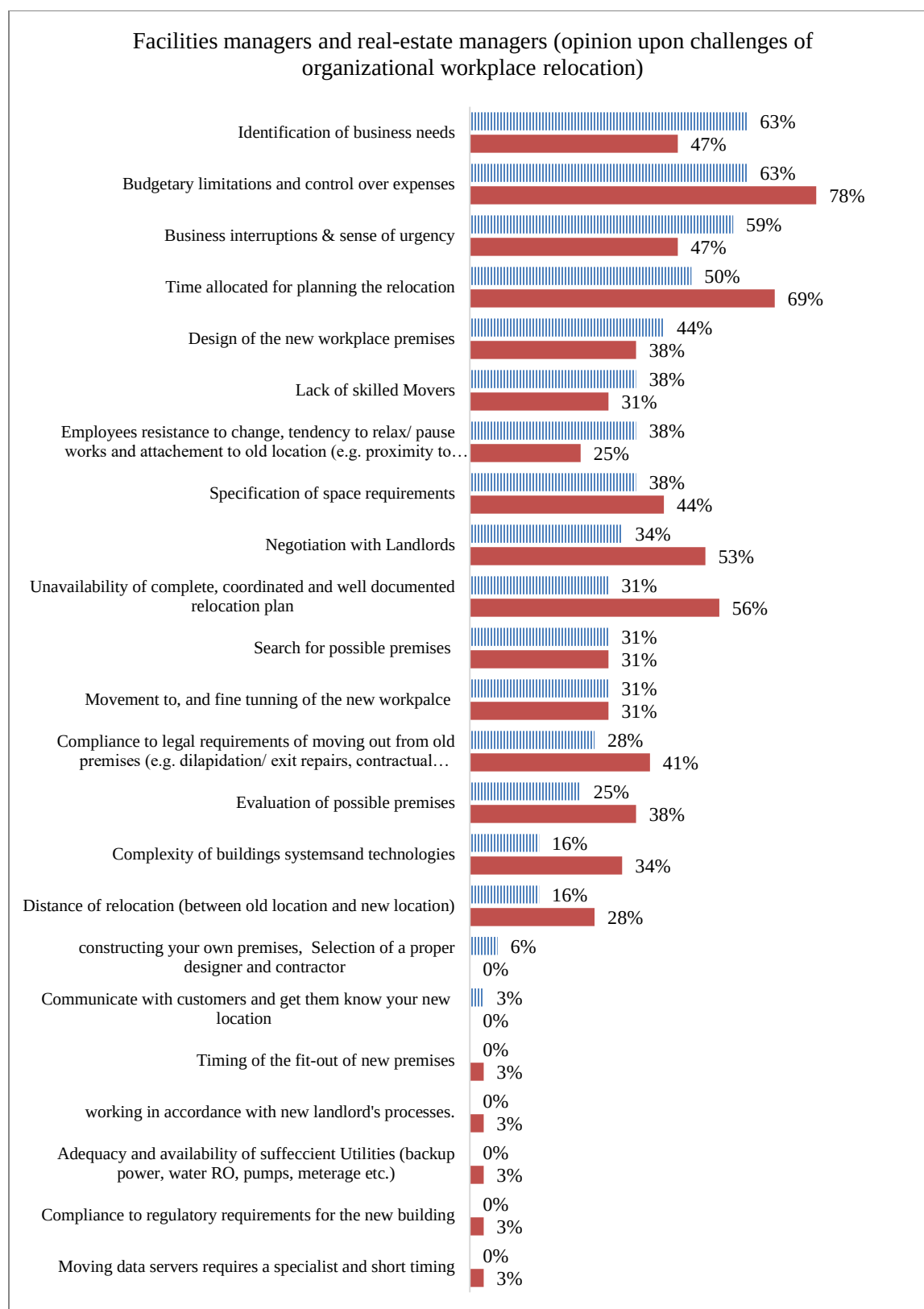


Figure 27 - Facilities managers and real-estate managers (opinion upon challenges of organizational workplace relocation)

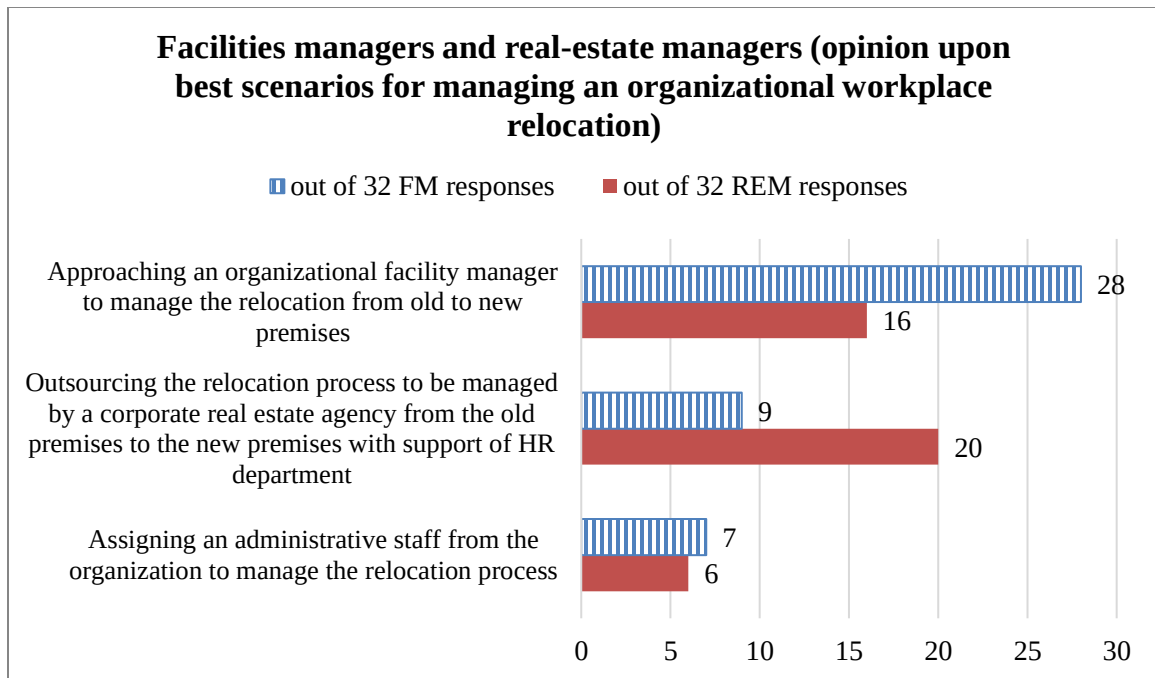


Figure 28 - Facilities managers and real-estate managers (opinion upon best scenarios for managing an organizational workplace relocation)

The facilities managers were asked to indicate criterions of selecting a **mover**, the five most agreed upon (in order) were:

- Use of advanced technologies for moving, labeling and referencing the assets.
- Portfolio of previous relocation projects.
- Fees for the relocation services.
- Number of skilled and unskilled labors.
- Agility (number of vehicles and capacity for conducting the move).

On the other hand, the real-estate managers indicated:

- Portfolio of previous relocation projects.
- Agility (number of vehicles and capacity for conducting the move).
- Number of skilled and unskilled labors.

- Use of advanced technologies for moving, labeling and referencing the assets.
- Fees for the relocation services.

Figure 29 compares both opinions indicate the mutual agreement upon the highest five criterions between both groups of respondents.

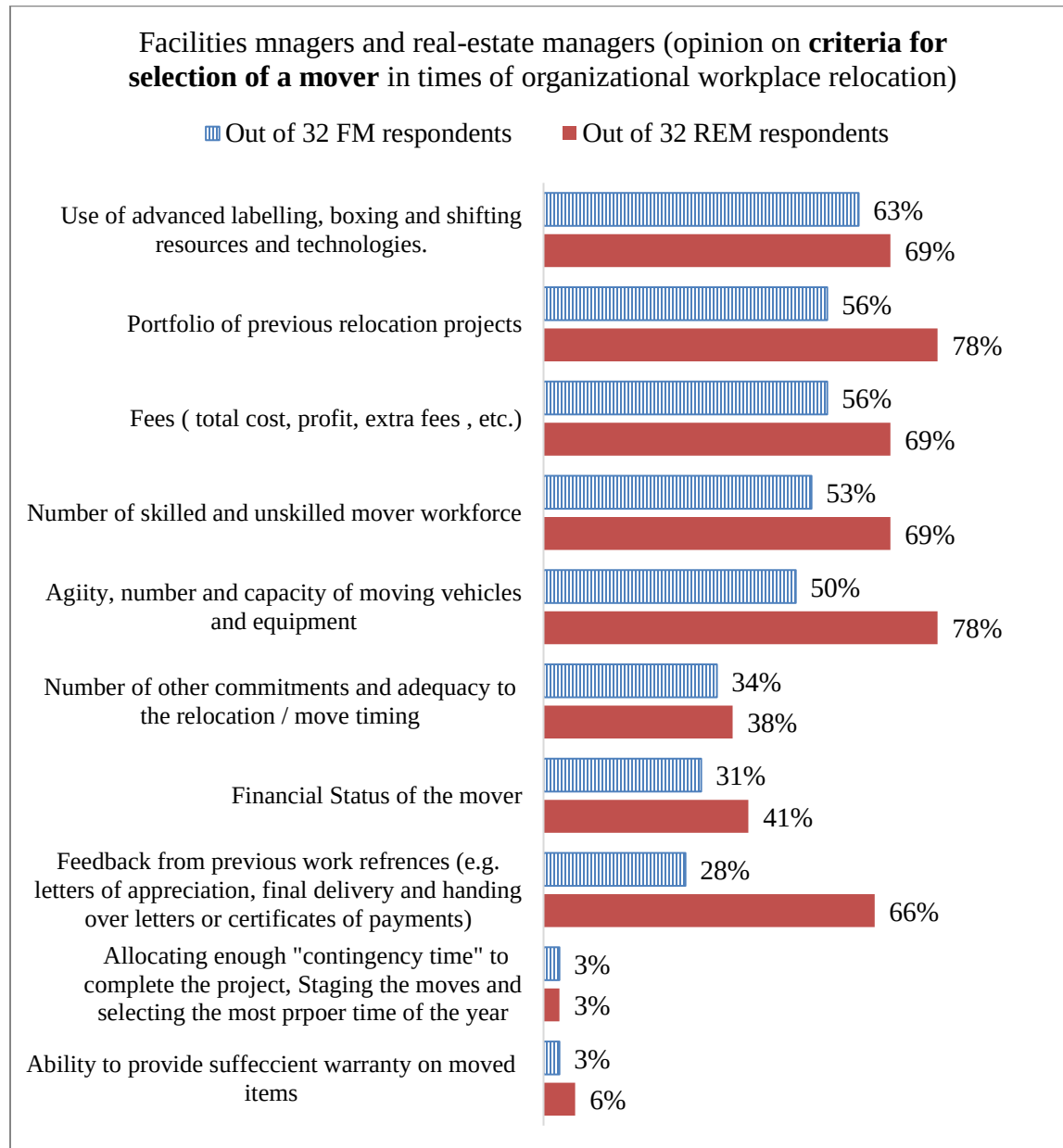


Figure 29 - Facilities managers and real-estate managers (opinion on criteria for selection of a mover in times of organizational workplace relocation)

The facilities managers were asked to indicate criteria of selecting a **supplier**, the five most agreed upon (in order) were:

- Compliance to workplace design and relocation plan.
- Lead times required for delivering materials.
- Availability of stock for the required materials.
- Fees (cost of materials, items, *etc.*)
- Ease of installation, packaging and movement of items to be supplied.

On the other hand, the real estate managers indicated:

- Lead times required for delivering materials.
- Fees (cost of materials, items, *etc.*)
- Portfolio of previous projects.
- Availability of stock for the required materials.
- Compliance to workplace design and relocation plan.

Figure 30 shows both opinions.

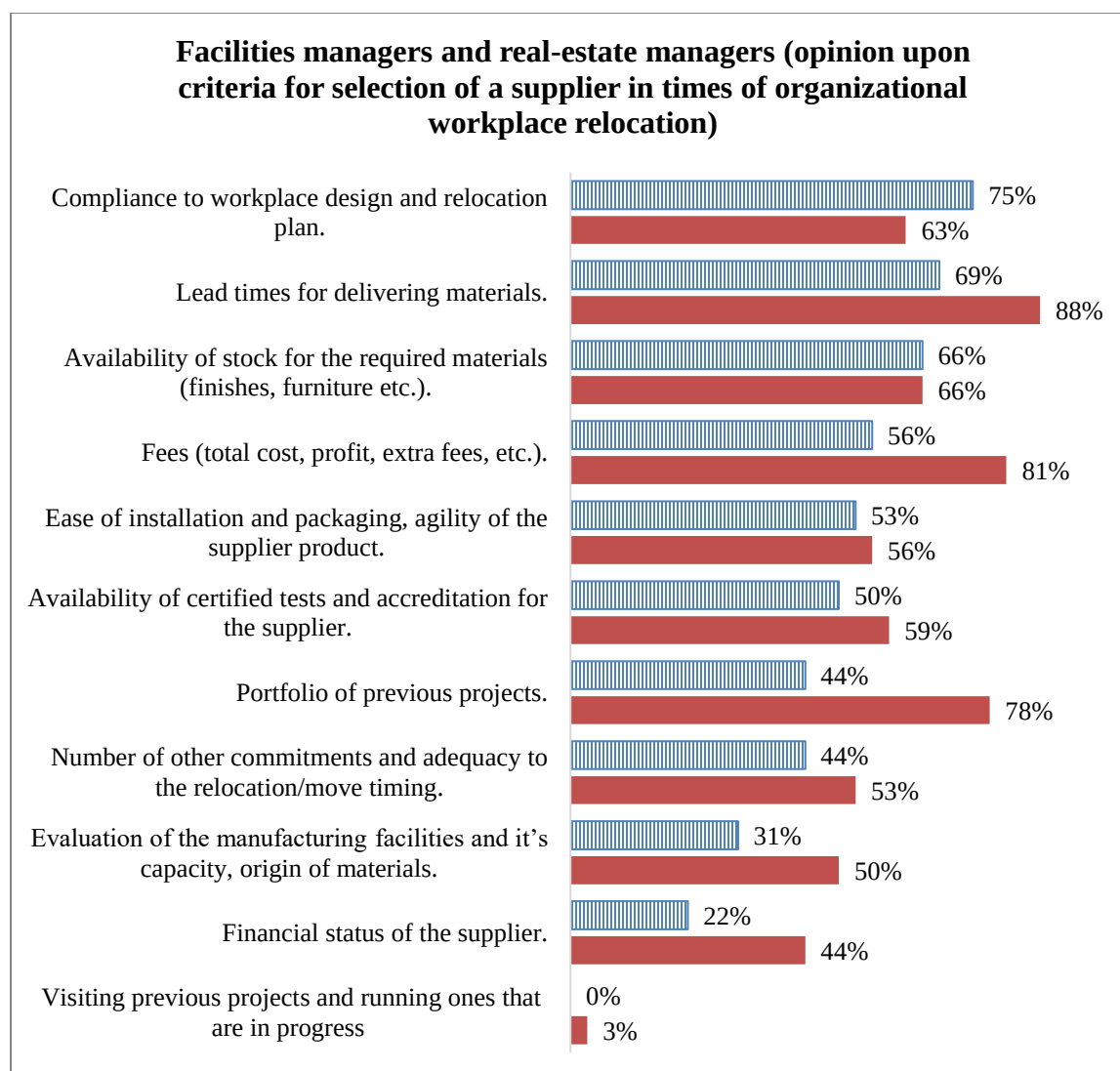


Figure 30 - Facilities managers and real-estate managers (opinion upon criteria for selection of a supplier in times of organizational workplace relocation)

The facilities managers were asked to indicate criterions of selecting a **fit-out contractor**, the five most agreed upon (in order) were:

- Competency to coordinate with several contractors, movers and suppliers.
- Portfolio of previous projects.
- Number of other commitments and adequacy to the relocation timing.
- Number of skilled and un-skilled workforce.

- Fees (total costs, overhead and profits, *etc.*).

On the other hand, the real estate managers indicated:

- Portfolio of previous projects.
- Fees (total costs, overhead and profits, *etc.*).
- Competency to coordinate with several contractors, movers and suppliers.
- Financial status of the contractor
- Number of skilled and un-skilled workforce.

Figure 31 shows both opinions.

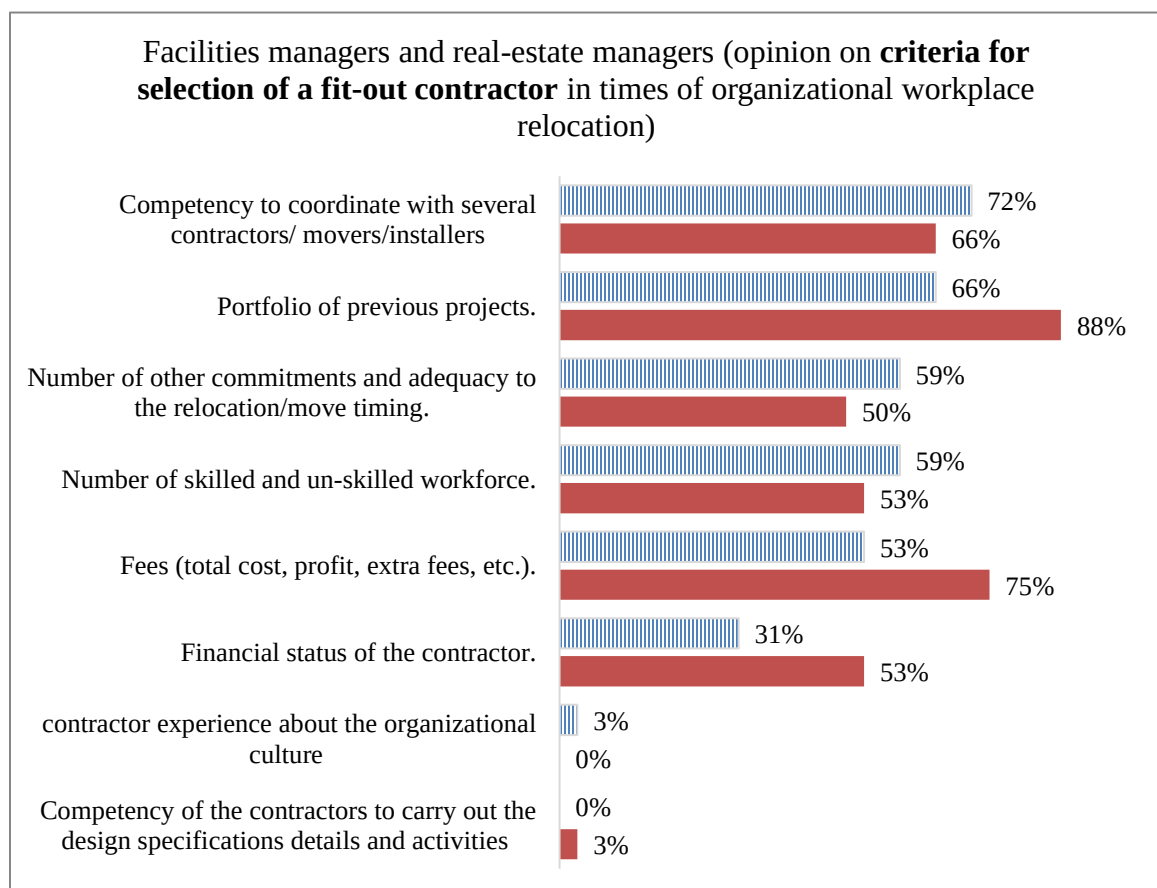


Figure 31 - Facilities managers and real-estate managers (opinion on criteria for selection of a fit-out contractor in times of organizational workplace relocation)

For the functional considerations in designing the new workplace prior for relocation, both groups were asked, the facilities managers indicated the five most important considerations to be:

- Space layout due to departmental adjacencies.
- Arrangement and availability of meeting rooms and collaborative work areas.
- Type of space layouts (open plan offices, closed offices, activity-based office).
- Availability of storage and archiving space.
- Privacy and public zoning of spaces.

On the other hand, the real-estate managers indicated:

- Privacy and public zoning of spaces.
- Types of space layout (open plan, closed offices, activity based).
- Availability of storage and archiving.
- Availability of communal facilities (*e.g.* break rooms, restaurant *etc.*).
- Arrangement and availability of meeting rooms and collaborative work areas.

Figure 32 shows both opinions.

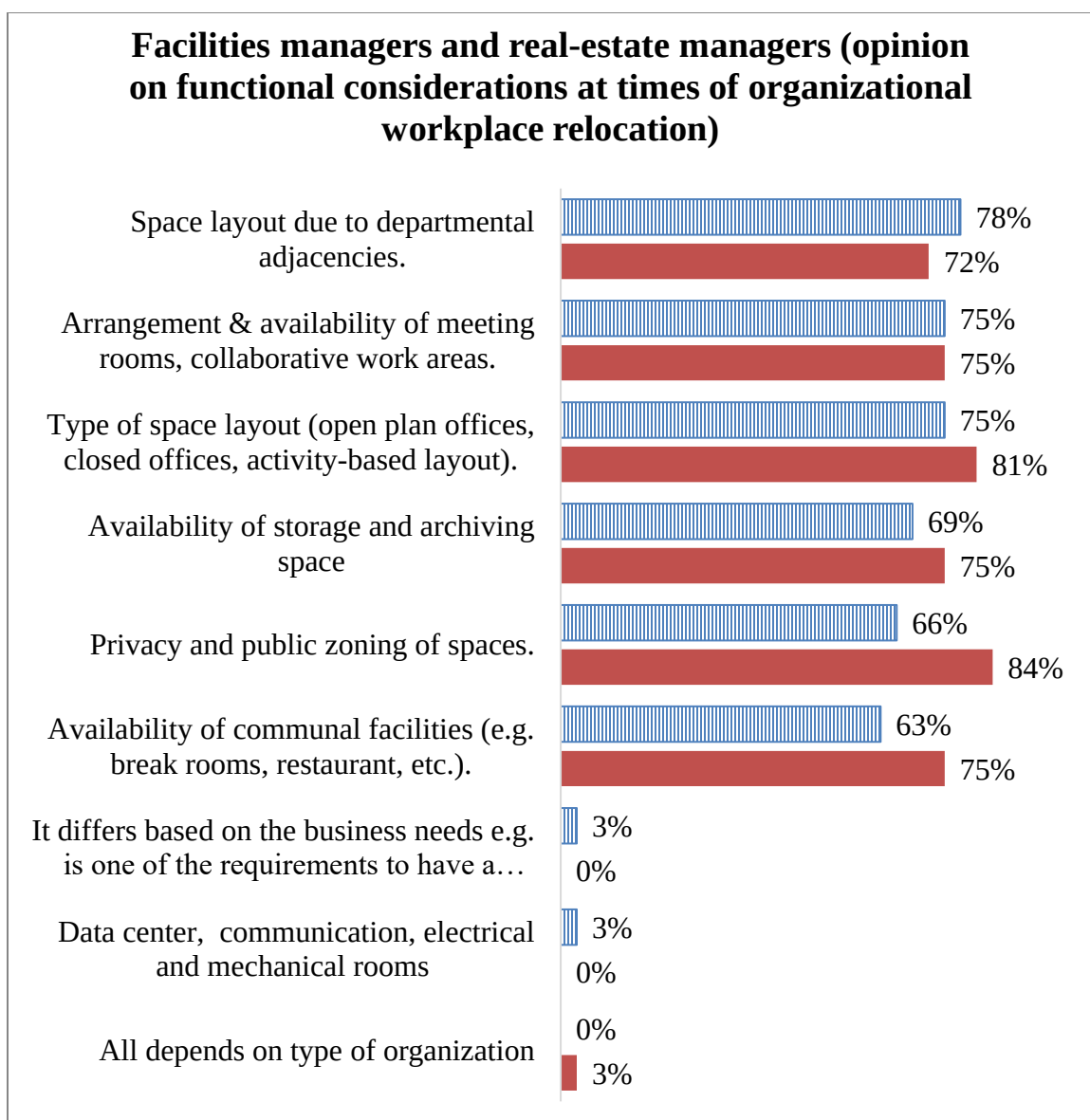


Figure 32 - Facilities managers and real-estate managers (opinion on functional considerations at times of organizational workplace relocation)

For the technical considerations in designing the new workplace prior for relocation, both groups were asked, the facilities managers indicated that the five most important considerations are:

- Ease of cleaning and maintenance.
- Ergonomics of design of furniture and workplace facility.

- Compliance with codes and standards.
- Adequate aesthetics for the workplace.
- Adequate usage of computers, mobile devices, printing, scanning and technology.

On the other hand, the real estate managers indicated:

- Compliance with codes and standards.
- Ease of cleaning and maintenance.
- Adequate use of communication tools (*e.g.* IP telephony, high speed internet, audio visual systems, *etc.*).
- Adequate usage of computers, mobile devices, printing, scanning and technology.
- Ergonomics of design and workplace facility.

Figure 33 shows both opinions.

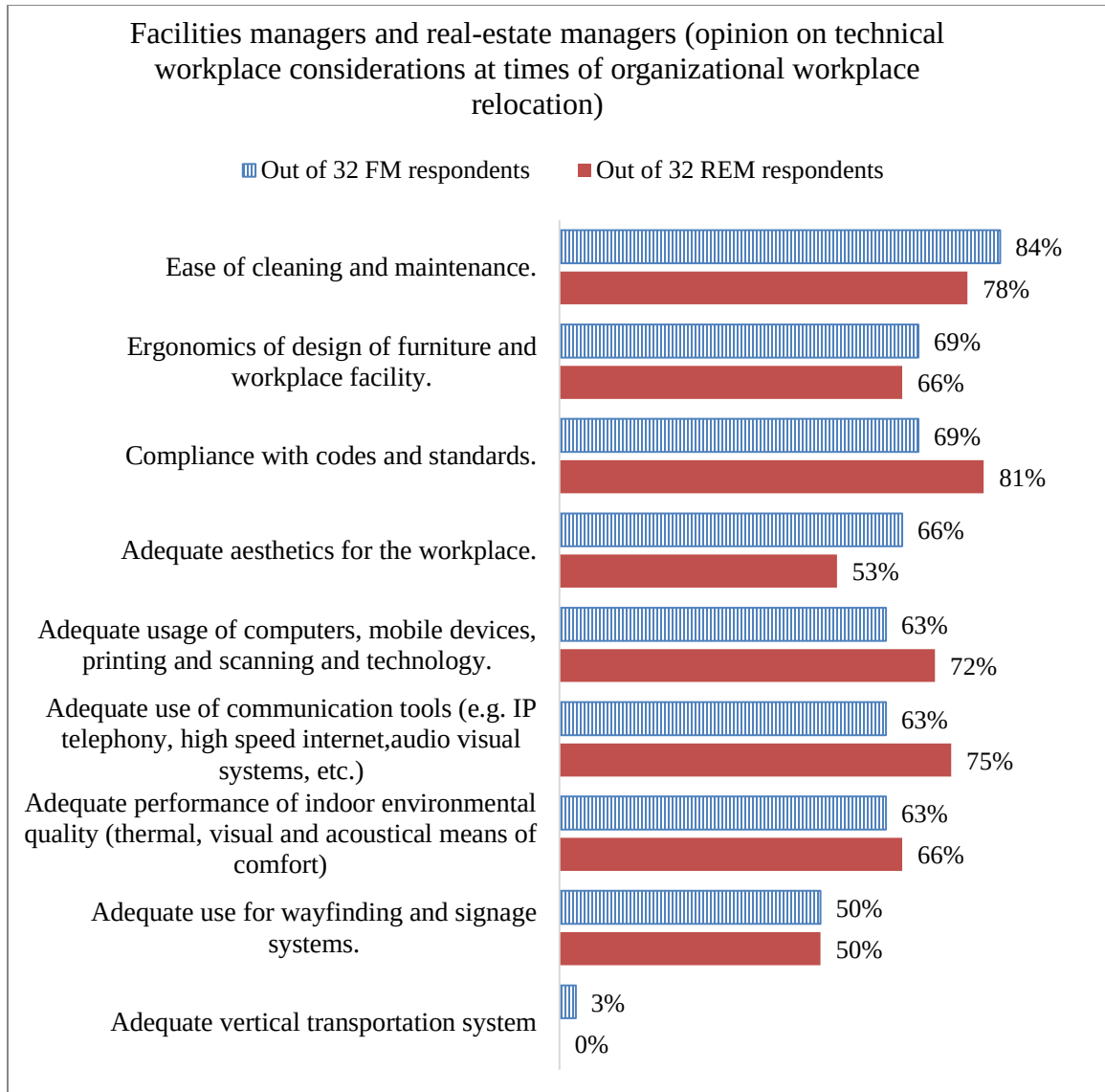


Figure 33 - Facilities managers and real-estate managers (opinion on technical workplace considerations at times of organizational workplace relocation)

In the next chapter, the framework developed for the process of workplace relocation will be presented and described.

CHAPTER 5

THE FRAMEWORK DEVELOPMENT FOR THE PROCESS OF ORGANIZATIONAL WORKPLACE RELOCATION

5.1 INTRODUCTION

The lack of a systematic process which comprehends clarification and identification of required processes of organizational workplace relocation in literature has been referred to in the literature review chapter. Besides, the absence of a published guidelines for a systematic procedure for organizational workplace relocation in Saudi Arabia, encourages the need for this research objective. The framework is a tool, for organizations willing to relocate, whereas it covers several aspects that assist mitigating the challenges of relocation. Thus, this chapter presents the development of a framework that is aimed to identify and clarify the process of organizational workplace relocation; by including activities, resources, stakeholders and requirements.

The proposed framework as discussed in earlier chapters will cover the phases of relocation thoroughly and will be developed based on international literature findings. Furtherly, it is based on professional's observation of drivers, risks and challenges that may face organizations in times of organizational relocation. The framework focuses on the activities which ensure the efficient and effective deliverables from a relocation project by integrating people, place and process within office buildings workplaces for the purpose of improving the quality of organizational work environments and the productivity of its core businesses. The framework will guide by standards, refer to exemplary international

practices wherever required and available to ensure the consideration of recognized practices of works.

Relocation management is an application of knowledge, skills, tools and techniques to workplace change activities, to meet the relocation requirements. The relocation can be successfully achieved by the appropriate application and integration of the relocation management process as identified within the proposed framework. The framework is proposed to effectively help organizations to meet business needs, satisfy organizational decision makers expectations, predict several aspects of relocation, increases the chances of successfully delivering the relocation, reflect time impacts on change of workplace facilities by relocation delivery, resolve problems and issues that may occur through relocation, mitigate risks of relocation, optimize the use of organizational resources, identify, recover or terminate failing relocations, as well to manage constraints such as (quality, schedule, costs, resources), balance the influence of relocation constraints (such as changes in scopes, increase of time and cost) and utilizing better methods to manage relocations (Langley, 2017).

Poorly managed relocation projects may result cost overruns, poor quality of new premises, increased chances for reworks, uncontrolled expansions in relocation scopes, loss of organizational image, increased resistance of change by occupants and impacts several stakeholders. To sum up, the unsystematic and biased relocation decisions, processes may increase the chances of failure, to meet organizational objectives, for which the decision of change was undertaken (Langley, 2017).

Workplace relocations are key way to create opportunities for businesses, enhance its processes and satisfy its implementors; which reimburse the benefits of organizational effort to enhance the workplace environments (Langley, 2017).

Due to the scarcity of resources, tighter findings and budgets, need to minimize business disruptions during relocation and rapid changes to technology, the workplace environment should act dynamically to the accelerating challenging of change. Thus, organizational leaders are expected to embrace the framework of workplace relocation by utilizing its processes to consistently initiate, manage and deliver business value by relocation (Langley, 2017).

The need of organizational business to centralize and decentralize workplace facilities, declares the need for a systematic process of relocation. In such circumstance, the relocation project turns into a program with a multiple relocation of workplaces grouped together in the making. As several workplaces relocate to multiple sites, into one or an individual workplace turns into multiple of sites. The framework involves such consideration in the process while it refers to several cases of relocation options such as: lease ,own or construct. Thus, it can be generic and applied as a guide for professionals willing to relocate workplace facilities. The framework is described schematically in IDEF₀ (integration definition for function modelling) process model diagram, where it displays the interaction between activities, in term of identifying the inputs, outputs, controls and mechanisms of each activity. Furtherly, the framework enables business value creation through relocation, by sustaining the returns of workplace relocation and preserving the future prospects of workplace relocation, by ensuring viability of the workplace management procedures, enabling attention to future workplace changes.

5.2 ORGANIZATIONAL WORKPLACE RELOCATION

The framework model consists of three sequential phases. Each phase is achieved through sequential activities. The three sequential processes of the framework model are:

1. **Initiation of relocation:** Initiate the Pre-Relocation Activities.
2. **Implementation and control of relocation:** Implement the Relocation Activities.
3. **Achieving relocation viability:** Conduct the post-relocation Activities.

5.3 THE FRAMEWORK OF ORGANIZATIONAL WORKPLACE RELOCATION

The framework of organizational workplace relocation consists of three parent processes (P1, P2 and P3), as shown in figure (Framework IDEF₀ - 1). These are the detailed descriptions of each of the three main processes of the framework of organizational workplace relocation:

5.3.1 Initiate the pre-relocation activities (P1)

5.4.1.1. Process definition

The “initiate the pre-relocation activities” process (node “P1” in figure framework IDEF₀ -1) involves analyzing business needs, assessment of existing facilities conditions, assessment of relocation options, planning for the relocation, allocating the budget needed for the relocation and designing the new premises.

This process entails conducting meetings between organizational business managers and the facilities manager, for reviewing business needs, functional and

technical workplace needs, the required workplace characteristics, as well as the legislative and regulatory workplace requirements. The business needs will be identified based on prospects of organizational cultural and image requirements and employee's needs. A team will be formed to initiate the pre-relocation processes and set an allocated budget to fund the implementation of the relocation activities.

The main outputs of this process are a statement of business needs, movable assets, approved relocation plan and specifications and a defined relocation budget. This process is divided into six functions as described and illustrated in (Fig. Framework IDEF₀ - 1).

5.4.1.2. Process Activities

5.4.1.2.1. Analyze business needs for relocation (P1.1)

Analyzing business needs will inform the organization on their needs (Feldman *et al.*, 1998; Pulakos *et al.*, 2000; Rothe *et al.*, 2014; Balbontin *et al.*, 2019) for expansion and downsizing (Shortland, 1987; Pellenbarg *et al.*, 2002; Brouwer *et al.*, 2004; Gregory *et al.*, 2005; Hassanain, 2010a; Hills *et al.*, 2014b; Asif, 2016), centralization and decentralization (J. Lee, 2002), facilities requirements for mergers and acquisitions (Brouwer *et al.*, 2004; Preiser & Vischer, 2008; Rothe & Heywood, 2015; Christersson & Culley, 2018), need to terminate existing facilities (Preiser & Vischer, 2008; Christersson & Rothe, 2012a; Larsen *et al.*, 2018) contracts and need to change region of operation (Goddard & Pye, 1977; Gounden, 1999; Brouwer *et al.*, 2004). The activity starts by identification of functional (Straub, 2009; Wineman & Barnes, 2018a) and technical workplace

needs (Hassanain, 2010a; Christersson & Rothe, 2012a; Leleur, 2013) according to organizational image and culture (Williams & Harris, 1988; Morgan & Anthony, 2008; Christersson & Rothe, 2012a). A team of facility manager, financial analyst and business managers will be formed to analyze business statement of needs (Ciaramella & Dettwiler, 2011).

The main output of this activity is a statement of business needs (Harris, 1987; Lee & Scott, 2009; Roper *et al.*, 2009; Safian *et al.*, 2011; Jylhä *et al.*, 2015; Lahtinen *et al.*, 2015; Claire *et al.*, 2016; Smith *et al.*, 2019) recommending assessment of organizational existing facilities (Rugless, 1993; Straub, 2009).

5.4.1.2.2. Assess the condition of existing facilities (P1.2)

Assessment of existing facilities' conditions will identify churn rate and suitability of workplace for the business functional and technical requirements (Rugless, 1993). The activity starts by listing existing facilities and the underlying assets for the purpose of evaluating their conditions according to criterion (Abbot *et al.*, 2007). A facility manager will conduct this activity to report observations, findings and recommendations (in a narrative, quantitative and qualitative formats) (Leleur, 2013; Langley, 2017), this is a principal approach to formulate a justified organizational decision of relocation (Rothe *et al.*, 2015).

The main output of this assessment is to identify the organizational need for a workplace relocation. This activity is pivotal to decide upon the continuance of relocation activities.

5.4.1.2.3. **Assess relocation options (P1.3)**

Assessment of relocation options activity serves the need to find and select potential new premises for relocation (Williams *et al.*, 1988; Burt, 1990; Christersson & Culley, 2018). The activity identifies the best scenario for acquirement of new premises, according to a justified cost/benefit analysis, a targeted set of locations, aspired proximities to amenities and according to an acceptable preliminary budget of relocation (Harris, 1987; Brouwer *et al.*, 2004; Nitsch, 2006; Rothe *et al.*, 2014). The facility manager may reach a real estate agent to investigate for best offered available options, based on an anticipated relocation scenario to either: own, lease and construct, as well as to signify each option characteristics and advantages (Rothe & Heywood, 2015). The facility manager will report findings (in the form of comparative info-graphs, interactive tables, intelligence dash boards for operational forecasts, indicating expected time needed and preliminary estimated costs) of options assessment, to obtain the authorized business manager approval. The financial analyst will determine the magnitude of organizational acceptable funds for relocation.

The main output of this activity is a sophisticated listing of a well-thought-out select of options for the new premise, which are fit for organizational requirements, functional and technical needs.

5.4.1.2.4. Plan for relocation (P1.4)

Planning for relocation, serves the need to fix relocation milestones, in accordance to organizational business commitments. A planning engineer will estimate the time needed to frame the successive (high level) activities of relocation, (in the form of Gantt chart aided with narrative emphasis), (Willett & Green, 1997; Langley, 2017). The facilities manager will express the quality requirements, forethought for at the new premises. A design professional may be involved to assist the facilities manager in transforming the functional and technical workplace needs into a set of design and space requirements (Lahtinen *et al.*, 2015; Candido *et al.*, 2019).

The main output of this activity is to produce a relocation plan (Hills & Levy, 2014) that is approved by the business managers, to identify in detail, the relocation objectives and mitigate any potential disruptive risks of relocation to business service delivery.

5.4.1.2.5. Allocate the budget for relocation activities (P1.5)

The allocation of budget for relocation activities serves the need to detail, categorize cost elements and to control the relocation expenses (Hassanain, 2010a; Olawale *et al.*, 2010; Wu, 2010; Claire *et al.*, 2016; Islam *et al.*, 2019). A team of facilities manager, real estate agents, design professionals and financial analysts, will work thoroughly, to develop the relocation budget covering the high-level detail of expenditures, and according to the identified boundary limits of the organizational financial statement and capabilities. The quality fore-sought for the

new premises, fixes the magnitude and total amount of the organizational investment in workplace by relocation. The production of the detailed budget must be maintained, according to the framed relocation plan milestones and the selected relocation option and scenario (M. K. Davis, 2012).

The main output of this activity is an approved detailed budget for relocation activities.

5.4.1.2.6. Design the new premises (P1.6)

The new premises design activity serves the need to select a workplace design and functional operation strategy, to accommodate an identified aspects of work processes required for the new premises to maintain an expected capacity of occupants (Roper *et al.*, 2009; Lahtinen *et al.*, 2015). The design activity, delivers new workplace layouts and technical specifications, based on regulatory standards and requirements. This is to obtain the required legislative approvals prior for the relocation implementation. The design quality and specification of workplace facility components, systems, and layout must be developed to serve smoother and cost-effective operation and maintenance (O&M) requirements for the workplace, all to be cordially identified with the facilities manager input. The lifecycle assessment of the costly features, systems and assets, is necessary to justify the projected time of the new premises (Preiser, 2005; Ventovuori, 2006). A facilities management procurement strategy must be considered, to analyze the potential partnerships (with service providers), targeting a sustainable supply chain for operation, and flexible occupation at the new premises (Christersson & Rothe, 2012). The facilities manager, real estate agent and design professionals, must

scope the new workplace to satisfy the approved relocation budget. The design development stages should meet the targeted set of relocation milestone (Abdullah *et al.*, 2015; Carrincazeaux *et al.*, 2015; Rincon *et al.*, 2018; Balbontin *et al.*, 2019).

The main output of this activity is an approved and issued to proceed “workplace relocation plan” with a “complete set of design documents and specifications” (Capasso, 2003; Marmaras & Nathanael, 2012; Queensland Government, 2012).

5.3.2 Implement the relocation activities (P2)

5.4.2.1. Process definition

The “Implement the relocation activities” process (node “P2” in figure Framework IDEF₀ - 1) involves: preparing work packages, selecting contractors, suppliers and service providers, acquirement and fit-out of the new premises, announcing the relocation activities, implementing the move, and evaluating compliance to the relocation plan.

This process entails preparing work packages for conducting a procurement strategy which develop to implement the relocation activities; constrained by a relocation plan budget according to design specifications and operation and maintenance (O&M) requirements. A team should be formed to announce, implement the move to new premises and deliver service providers agreements and warranties.

The main outputs of this process are an occupied workplace and enclosing service providers' contracts and warranties. This process is divided into six functions as described and illustrated in (Figure Framework IDEF₀ - 3).

5.4.2.2. Process activities

5.4.2.2.1. Prepare work packages (P2.1)

The preparation of relocation work packages activity serves the need to structure the approved relocation plan and specifications in a way, that allows, sending request for proposals (RFPs) to the targeted specialized contractors, applicators, systems integrators (Raz & Globerson, 1998; US Department of Defense, 2001). The facilities manager with the financial analysts will work together to refine the detailed budget distribution of resources; to reflect changes that might arise throughout design changes. This activity enhances the understanding of the relocation project operation and maintenance (O&M) requirements, related specifications and resources needed to deliver the new premises. The preparation should adhere to the relocation plan approved milestones (Capasso, 2003). A planning engineer must be involved, to sequence (high level) milestones for work packages implementation.

The main output of this activity is a complete set of relocation work packages; organized and coded for procurement proceedings and progress monitoring.

5.4.2.2.2. Select contractors, suppliers & service providers (P2.2)

The selection (of contractors, suppliers and service providers) activity serves the need to procure the identified work packages, and allow for the pre-qualification procedures (Bubshait *et al.*, 1996; Karim *et al.*, 2006; Elsayah, 2016). The activity entails the use of procurement strategies to award contracts and select contractors for build, renovate, refurbish, install features of the new premises (Capasso, 2003; Saari & Heikkila, 2008; Rothe *et al.*, 2014). The contractors will be negotiated to provide a sophisticated detailed schedule for the related assigned work packages. While suppliers will provide and agree to commit to the payment, delivery terms and durations needed. The planner with the insight from the facilities manager will negotiate and reflect the selected contracts' schedules; to meet (the approved) milestones of the relocation plan. The facilities manager will ensure that the awarded contractors and suppliers have the required capabilities to deliver the work packages within the approved regulatory and legislative obtained approvals (Peter W. G. Morris and Jeffrey K. Pinto, 2007).

The main output of this activity is contracted work packages and (formulated detailed) schedules for acquirement and fitout of the new premises.

5.4.2.2.3. Acquire and fit-out the new premises (P2.3)

The acquirement and fitout of the new premises' activity serve the objective of delivering a physically operational workplace; ready for its occupants to move-in and settle for business continuity (Ingrey-Counter & Biles, 1994; Hills & Levy, 2014). This activity involves obtaining the required legislative and regulatory

permits; for the physical acquirement and fitout of the new premises (Capasso, 2003). The procurement strategy will be taken in place to be conducted and delivered; to monitor and transform the design work packages implementation by the construction and physical fit-out of the new premises (Capasso, 2003; Roper *et al.*, 2009). The facilities manager will ensure that quality requirements are audited and met by parties carrying creation and execution of the new premises; this is critical to also enhance and ensure the workplace adaptability (Arge, 2005; Forsythe & Wilkinson, 2015). The activity will be controlled by an engineer to assure time and cost expenditures (Islam *et al.*, 2019). The (detailed) schedules will be worked upon as a base line for monitoring and tracking progressed works for the new premises execution.

The main output of this activity is to deliver a furnished new premise that is ready to move in.

5.4.2.2.4. Announce relocation activities (P2.4)

The announcement of relocation activities may include developing a relocation assistance program to employees in order to break the struggles and resistance during change as well to retain talent (Feldman & Bolino, 1998; Capasso, 2003; Rothe & Heywood, 2015). The announcement can be in the form of an electronic email, newsletter, video film and descriptive material to introduce the new premises to workplace tenants. The facilities manager will work on the development of announcement (recommendations and circulars) to ensure that every staff is allocated to the specific workstation, while ensuring that movers are given list of movable assets and business storage, documents and allow for permits needed for

the move. The facilities manager will provide information for contacting departmental unit heads or coordinators (who will work as a point of communication between staff and the organization). The relocation budget should be adhered, to ensure that expenses of the advertising materials and inauguration are managed and consumed efficiently.

The main output of this activity is a move plan document (which eases and asserts liabilities and responsibilities throughout the move).

5.4.2.2.5. Implement the move (P2.5)

The physical move from the old premises to new premises is served by this activity. The movers will package, aid employees, provide trucks to shift assets and packages, install movable assets from old premises at the new premises, label belongings and items transferred to new premises in order to make the new workplace ready for the knowledge workers (Capasso, 2003; Hassanain, 2010a). The facilities manager will coordinate the moving activities and ensure that telephone and IT systems are properly allocated to the specific tenants' workstations. The financial analyst will manage the expenses of moving activities in order to save costs during the move and adhere to the relocation budget. The planning engineer will ensure the phasing of move activities to minimize business disruptions (Willett & Green, 1997; Capasso, 2003). The workplace facilities services responsibilities will be handed over to service providers; to ensure obtaining operational legislative and regulatory approvals (Harris, 1987; Swicegood, 1987; Capasso, 2003). The design professionals may be involved to provide consultancy on issues and concerns that emerged from workplace changes

(Lahtinen *et al.*, 2015). The move should be conducted according to quality requirements identified by the facilities manager. The property means of access and circulation for shifting items, packages and assets must be identified by the facilities manager to movers and tenants; to ensure safety and minimal disruption during the move. The facilities manager will manage the issuance of security permissions (for movers working staff and others) during specific shifts to minimize business disruption (Capasso, 2003).

The main output of this activity is to deliver the occupied new premises safely and sufficiently in accordance to the move plan.

5.4.2.2.6. Evaluate compliance to relocation plan (P2.6)

The occupied new premises quality and functionality compliance to relocation plan must be evaluated by the use of developed relocation checklists (Morgan lovell, 2015). The facilities manager will resolve snags and register changes to workplace design, allocation of staff and coordinate with departmental heads for the satisfactory relocation to the new premises (Linggar, Aminullah, & Triwiyono, 2019; Oktra, 2019). The facilities manager will manage the change of facility space plans (as built) to ensure adequacy of information for the effective facilities operation and maintenance (Lee & Scott, 2009).

The main output of this activity is to deliver as built records, service providers' contracts and warranties and completion of relocation to the new workplace facilities.

5.3.3 Conduct the post-relocation activities (P3)

5.4.3.1. Process definition

The “Conduct the post-relocation activities” process (node “P3” in figure framework IDEF₀-1) involves establishing workplace health and safety plan, developing and initiating workplace maintenance plans, developing and maintaining record keeping procedures and conducting post occupancy evaluations.

This process entails developing a workplace health and safety (WHS) plan to ensure employees commitment to safe and healthy work practices, and workplace compliance to regulatory and legislative requirements. Also, to ensure that operation and maintenance (O&M) requirements are met and consistent by an operational procurement strategy for commissioning service providers. A team will be formed to collect tenant’s feedback and deliver the workplace post occupancy evaluations (POE).

The main outputs of this process are a workplace health and safety (WHS) plan, maintenance plan and a record keeping system for the facilities management. This process is divided into four functions as described and illustrated in (Framework IDEF₀ - 4).

5.4.3.2. Process activities

5.4.3.2.1. Establish a workplace health and safety (WHS) plan (P3.1)

Establishing Work Health and Safety Plan serves the need to provide guidelines and procedures to maintain and standardize a healthy and safe workplace practices and system. The main objective of this activity is to prevent workplace accidents, injuries and provide guidelines for emergency response (ASTM International, 2015a; www.comcare.gov.au, 2016). The facility manager will identify means of access, egress on to prepare emergency plans and implement drills to ensure adequate level of training for workplace occupants. The WHS identifies liabilities, rights and distinguish organizational & employee's responsibilities for the safe occupancy of the workplace (Thomason & Pozzebon, 2002; WSCC, 2016). The WHS must prevent unhealthy and harmful use of assets, substances or practices to eliminate hazardous risks. It will contain plans, instructions, procedures and contact information for emergency related responses, observations and complaints (Thomason & Pozzebon, 2002; Ferrett, 2016). Furtherly, it provide guidance for preventive health conducts at the workplace.

The main output of this process is an approved workplace health and safety (WHS) plan that can be distributed to all organizational staff.

5.4.3.2.2. Develop and initiate workplace maintenance plan (P3.2)

Developing a workplace maintenance plan serves the need to initiate maintenance activities within a governing strategy and descriptive procedures

of cyclic and noncyclic maintenance activities. The procurement strategy utilized for selection of service providers organizes maintenance procedures. The facilities manager will plan thoroughly with the service providers the preventive maintenance activities for building systems and assets. Thus, the as built records must be updated accordingly (Roper *et al.*, 2009; Straub, 2009; Jancey *et al.*, 2016).

The main output for this activity is an approved workplace maintenance plan (WMP). That can guide tenants, service providers and the facilities manager on the maintenance strategies, requisition, processes and responses.

5.4.3.2.3. Develop and maintain record keeping procedures (P3.3)

Developing and maintaining a record keeping procedure serves the need to categorize, analyses and manage all forms, reports, logs, communication, archiving and storage of all workplace related observations, incidents and records of data (Preiser & Vischer, 2008; University of Houston - Facilities Management dept., 2012). According to as built records, operation and maintenance (O&M) requirements, workplace related procurement strategy and types of systems and services, the facilities manager will set guidelines for recording and retrieval of workplace related data (Straub, 2009). The use of computer aided facility management software (CAFM), cloud-based communication and remote inspection features utilizing remote sensors or building management systems (BMS) and developing a workflow for maintenance reporting enhances the practice of record keeping (Willett & Green, 1997; Queensland Department of Public Works, 2003; ASTM

International, 2017; RICS-IFMA, 2018). Workplace records and data have a great potential, it provides insights and influences enhancement of workplace operations and maintenance, by spotting assets frequent downtimes and conditions.

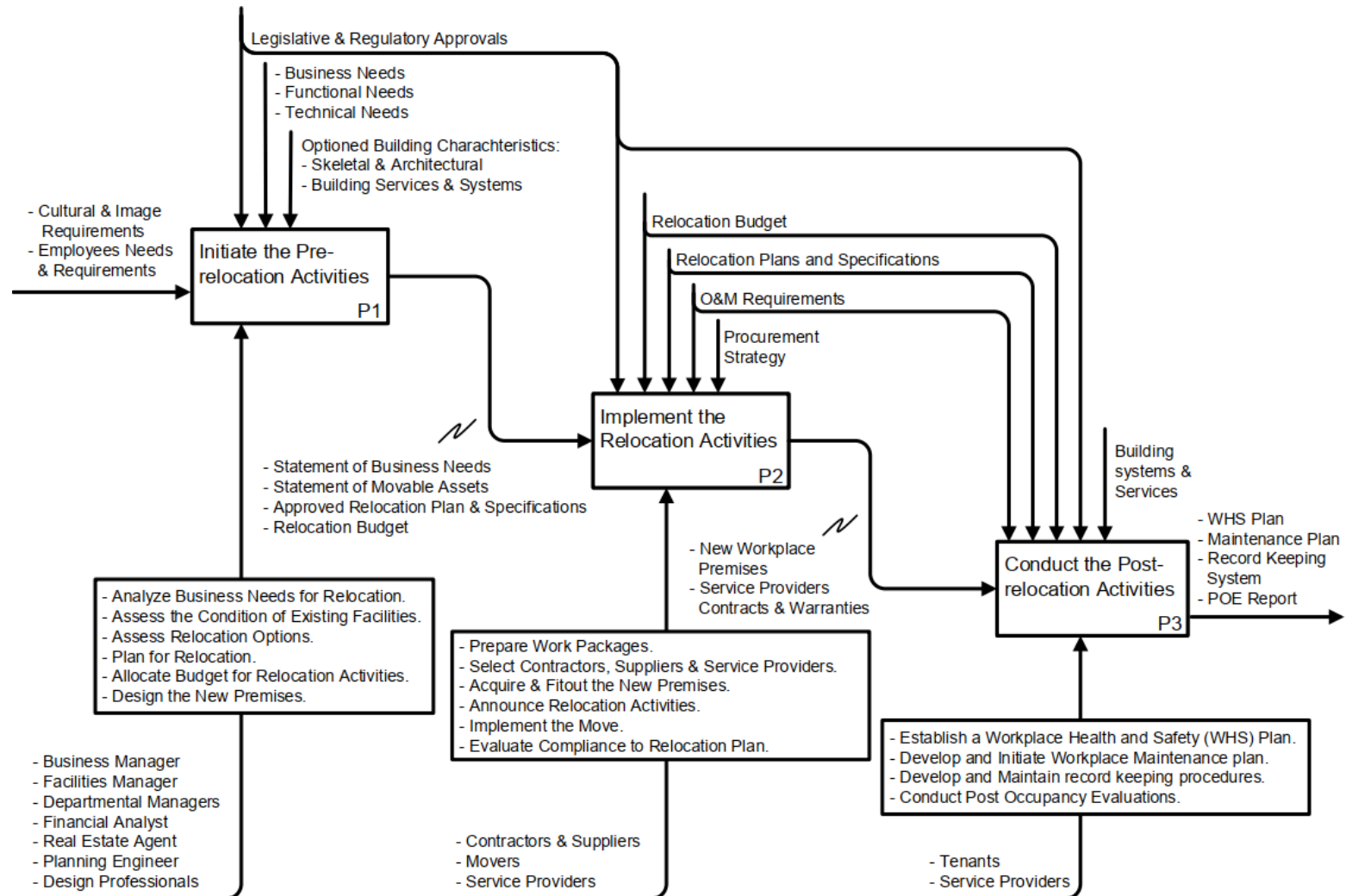
The main output of this activity is a maintained record keeping system. This provides detailed data about the workplace building systems operation and maintenance and its assets performance. This provides historical means and a fundamental conduct necessary for lessons learned register.

5.4.3.2.4. Conduct post-occupancy evaluation (P3.4)

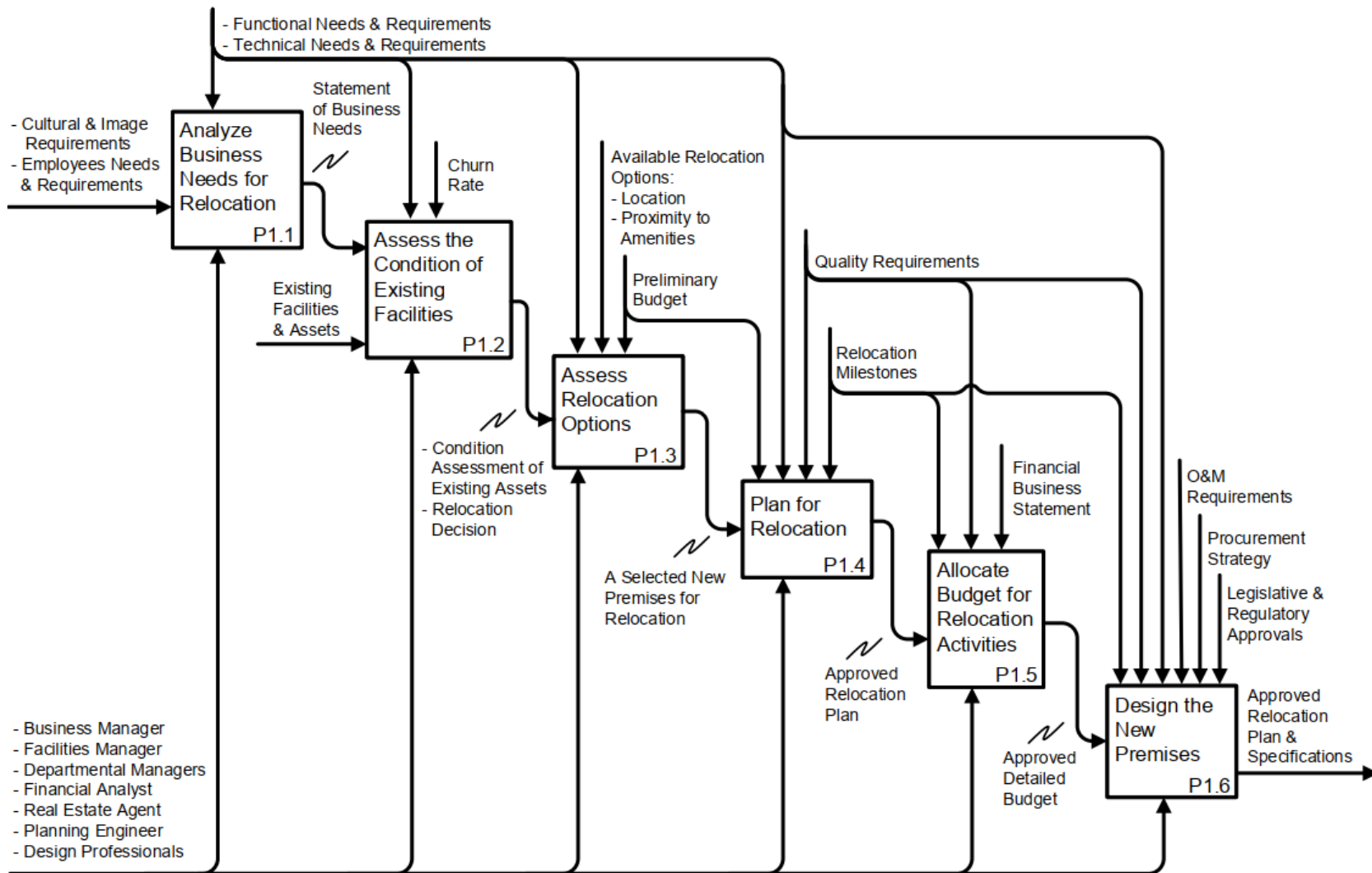
Conducting a post occupancy evaluation serves the need to evaluate occupants' satisfaction and building performance after a considerable time of occupation (Preiser, 2005); that is recommended to be 12 months after occupation. The activity entails evaluating fit of workplace features, assets and design to legislative and regulatory requirements, operation and maintenance (O&M), procurement for maintenance plans, impacts of workplace on occupants' productivity, and conformity to workplace health and safety plan. The facilities manager will identify the level of effort needed and implement a systematic POE (through the use of questionnaire survey, checklists and investigative building performance measures and indicators) (Candido *et al.*, 2019; Göçer *et al.*, 2018; Preiser, 2005).

The main output of this activity is a post-occupancy report about the new premises, to maximize the workplace performance, meet organizational and

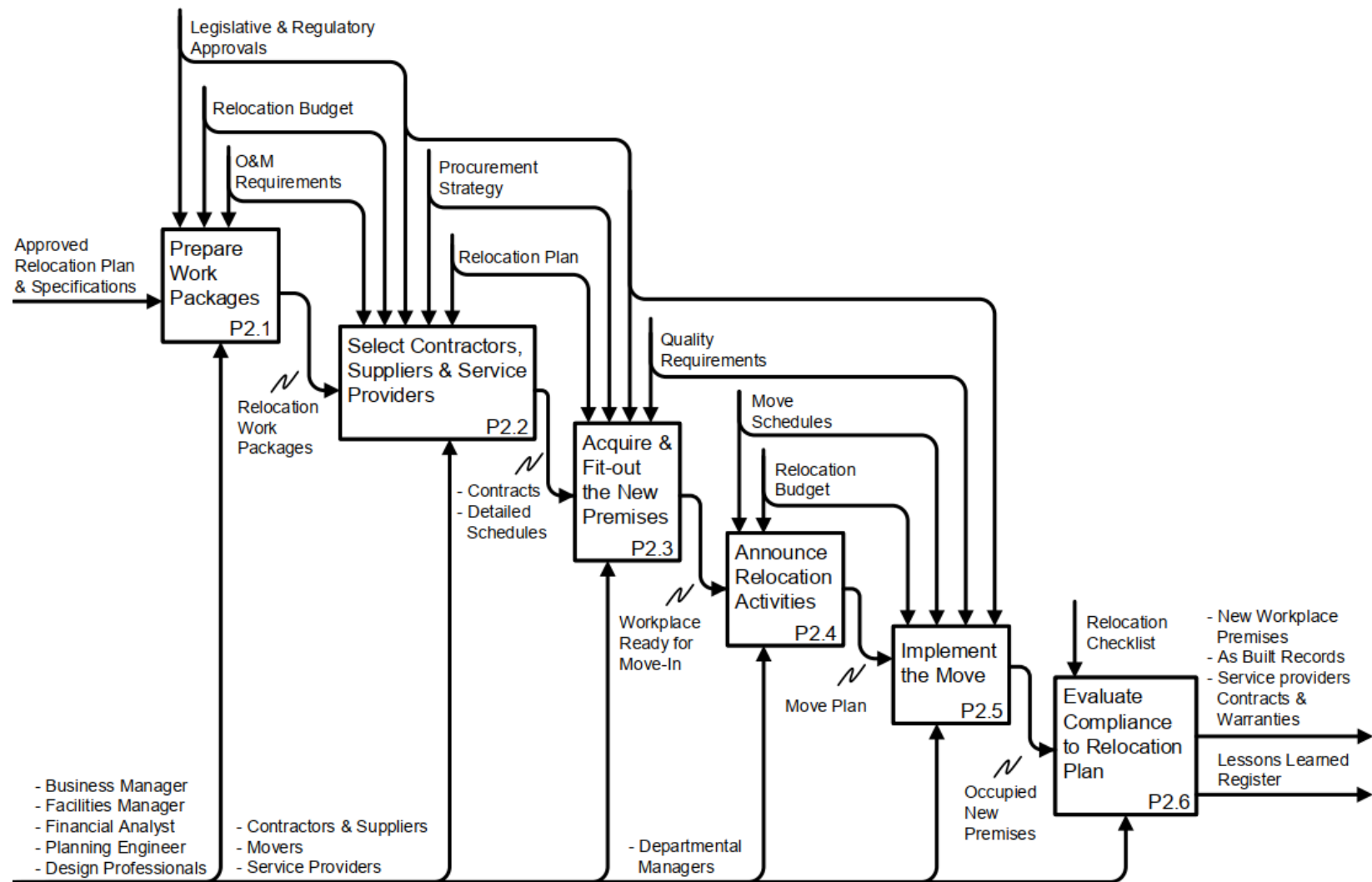
tenants needs and ensure that best operation and maintenance (O&M) practices are being successfully implemented at the workplace (Preiser, 2005; Pereira, *et al.*, 2016)



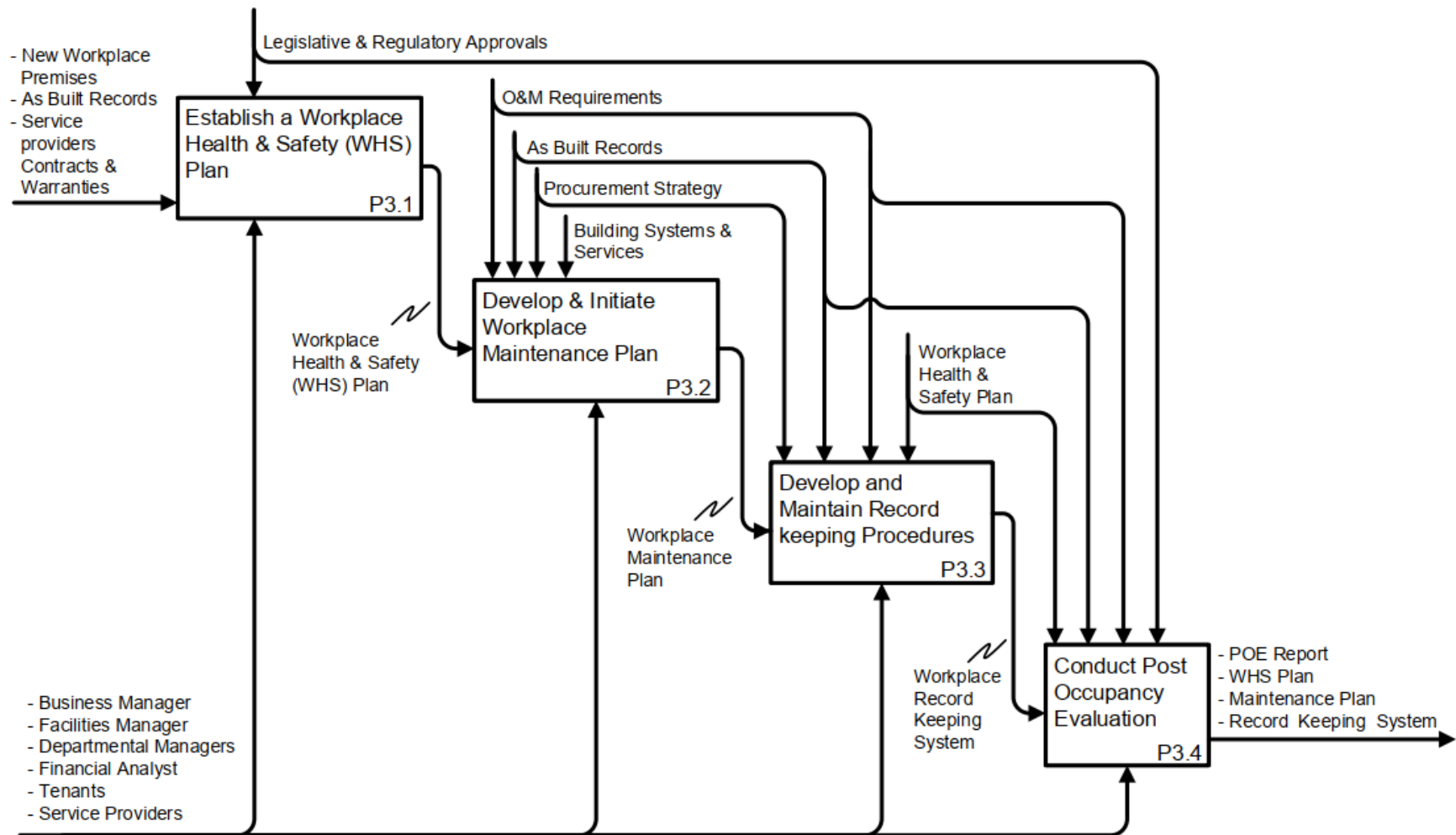
Framework IDEF₀ - 1 - Parent diagram showing the three main process of organizational workplace relocation (P1), (P2) and (P3).



Framework IDEF₀ - 2 - Initiate the pre-relocation activities (P1).



Framework IDEF0 - 3 - Implement the relocation activities (P2).



Framework IDEF0 - 4 - Conduct the post-relocation activities (P3).

5.4 DISCUSSION

Governmental visions for smart cities, investments in business districts, and organizational interests are generating access opportunities for investments and acquirement of commercial real estate, at newer locations (Zarabi and Lord, 2018; Kawai *et al.*, 2019; Lim, 2019). Thus, an adaptive change concerning relocation to a contemporary workplace has become a vital approach for solving challenges tackling organizations' sustainability (Rothe and Heywood, 2015; Sarasoja *et al.*, 2015). The workplace represents a capital value, being fixed asset. The primary purpose of a workplace is to facilitate the provision of a place for conducting work activities at an environment, which supports information sharing and knowledge processing functions (Hassanain, 2010). Hence, investigating the suitability of the workplace to sustain works' output in relation to current and future needs, could justify a relocation decision (Remøy *et al.*, 2019). Workplace relocation is an opportunity to introduce elements of change (Bull and Brown, 2012; Christersson and Culley, 2018). These elements are not limited to introducing new ways of work, improving functionality of the workplace and optimizing space usage, but more of a gate for improving employees' productivity, communication, commutes and accessibility (Lahtinen *et al.*, 2015; Zarabi and Lord, 2018). A relocation decision can be implemented through different scenarios and various formats. These may range from leasing a new space, to a holistic construction of a new workplace (Rothe *et al.*, 2014).

Nevertheless, making a smooth relocation is a challenging effort. Effective relocation requires a deliberate systematic process, which takes into consideration three significant dimensions. The first is the organizational needs based on the condition of its existing workplace facilities. The second dimension is the different phases of the relocation process,

namely “pre-relocation”, “relocation”, and “post-relocation”, where each phase requires the implementation of different functions that contribute to the relocation process. The third is the active involvement of different stakeholders, namely business analyst, real estate agents, contractors and service providers, occupants, and facilities managers, throughout all the phases of the relocation process. This chapter discussed the development of a framework for the workplace relocation process, in a purely objective manner. The developed framework would serve to provide facilities managers and corporate real estate managers with a standard methodology for realizing the relocation process throughout its lifecycle. The available published literature indicates that despite the fact that workplace relocation could be a necessity for the sustainability of businesses, there is a lack of integrated and comprehensive frameworks, which guides professionals to implement the process of workplace relocation, systematically. The proposed framework model consists of three sequential management processes, namely: (1) initiate the pre-relocation activities; (2) implement the relocation activities; and (3) conduct the post-relocation activities.

The proposed framework is presented in the form of an integration definition for function modeling (IDEF₀) process model diagram, as illustrated in figure (Framework IDEF₀-1). The methodology followed entailed the development of clustered graphical elaborations of management functions. Process models allow organizations to identify, analyze and improve their business practices and strategies, for the purpose of reducing costly scope variations and limiting resultant delays. IDEF₀ is a modeling language, designed to model the processes performed by an organization, or a software system (Hsu, 2019). The main benefit gained from using the IDEF₀ process model diagrams is the clear display of the interaction between the various functions, in terms of inputs, outputs,

constraints and mechanisms for each function. Thus, the framework presented in this chapter of research serves to fill the realized research gap for professionals by proposing a systematic approach that is generic, in the sense that it could be applied to any relocation project, in any locality.

CHAPTER 6

VALIDATION OF THE DEVELOPED FRAMEWORK FOR ORGANIZATIONAL WORKPLACE RELOCATION

6.1 VALIDATION OF THE DEVELOPED FRAMEWORK

The framework of organizational workplace relocation was designed based on qualitative review of related literature on topics of corporate real estate, relocation, fitout, workplace space management and project management. This involved identification of activities recommended to be done, restructuring the contained information to follow a systematic and logical process that are neatly described to represent the most generic possible process of organizational workplace relocation.

Then, the framework was developed using IDEF₀ diagrams to model the organizational workplace relocation process. where observed professional practice of occupying new workplace in Saudi Arabia, is validated by interviewing (high profile) six real estate managers (those who own first-class office towers at premium locations and lease its spaces to governmental entities, corporates and small and medium enterprises (SMEs)) and six facilities managers (those who manage office properties and facilities for wealthy groups of companies and banking towers, representing international and national organizations). The validation process was conducted by face to face interviews, utilizing a semi structured survey. Through making an introduction to each individual, by firstly stating the research topic title, objectives and explaining the framework step by step and briefing the following sections of the validation questionnaire:

- **Section (A) :** demographic questions about the respondents.
- **Section (B):** questions about the stakeholders who should be involved in the process of relocation and the documents that should be provided over each phase.
- **Section (C):** using a 5-points Likert scale (from “Extremely important” to “Not Important”), the framework was validated upon the activities over the three phases of relocation and a question about if the activity is being conducted by the respondent organization.

6.1.1 Pilot testing of the validation survey

The survey was tested, by interviewing a real estate manager and a facilities manager to:

- 1) assure that the questionnaire questions are not overly narrated or ambiguous.
- 2) assure that questions dialect is comprehensible and understandable.
- 3) ensure that time needed for filling the survey is efficient for respondents, and to eliminate un-necessary repetitions.
- 4) review the framework clarity, for each process, input, output, constraints and stakeholders.

The pilot testing has positively verified that the survey respondents comprehended the questions were sufficiently that the survey was timely efficient and are comprehensively inclusive of all aspects needed to validate the various activities of organizational relocation.

6.1.2 Distribution of the tested questionnaire survey

The framework and the questionnaire were demonstrated and elaborately explained to each of six facilities managers and six real estate managers. The importance of each activity was discussed thoroughly and fully comprehended by the respondent to ensure accurate perception of degree of importance as a 5-points Likert scale as ("Extremely Important", "Very Important", "Important", "Somewhat Important" and "Not Important") from each respondent point of view. Then, each activity was questioned if the respondent organization is implementing it; by either selecting "Yes" or "No".

6.1.3 Data Analysis

Data obtained from each of the respondents group (facilities managers and real estate managers) were categorized into three parts:

- **Part one:** general and demographic information about the respondents.
- **Part Two:** identification of percentages of frequency of agreement over stakeholders and documents needed for each phase.
- **Part three:** assessment of activities related to the process of organizational workplace relocation categorized under three parent processes; (P1) initiate the pre-relocation activities, (P2) implement the relocation activities and (P3) conduct the post-relocation activities.

6.1.4 Facilities managers validation of the framework

6.1.4.1 Part one : General Information (Respondents Names and Organizations)

Reference	Name	Position	Organization	Email
FM1	Mr. Imad Chbair	Director – Facilities management	Al Fozan Holding group of companies	projects_dir@alfozan.com
FM2	Mr. Abdullah Al Bahhar	Facility Management Officer	Rawabi Holding	abdullah.albahhar@rawabiholding.com
FM3	Mr. Adel Chaudhary	Facility Mechanical Engineer	ARAMCO – King Abdulaziz Cultural Centre	adeelchaudhary@hotmail.com
FM4	Mr. Imad El Rifai	Head of facilities and construction department	Saudi Consulting and Design Office	El-rifai@scado.com
FM5	Mr. Joey Borromeo	Facilities Manager	Al Rushaid Construction Co. Ltd.	Jfpborromeo@arccksa.com
FM6	Mr. Faisal M. Al Amoudi	Property and Assets Manager	Saudi British Bank	faisalmalamoudi@sabb.com

Table 25 – FM validators (respondents names and organizations)

6.1.4.2 Respondents years of experience

The years of experience were classified into four main categories: 'Less than 5 years', '5-10 years', '10-20 years' and 'Over 20 years'. The responses results shown that (2 out of 6) 33% were of over 20 years' experience, where (3 out of 6) 50% of respondents were between 10 to 20 years of experience and only (1 out of 6) 17% of respondents had 5 to 10 years of experience. None of the respondents was of less than 5 years of experience.

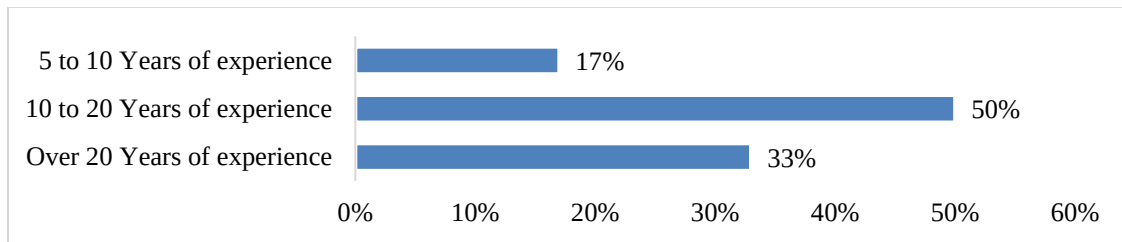


Figure 34 - facilities managers validators (years of experience)

6.1.4.3 Respondents involvement in relocation projects

All the respondents were involved at least once in a relocation project, or more, through their years of experience; which assures that they have been through different cases of workplaces relocation and capable of justifying descriptively the processes and activities needed to relocate an organization from a location A to a location B. The results shown that (4 out of 6) 67% were involved in relocating a low-rise office building sized (1 - 6 floors), where (4 out of 6) 67% were involved in relocating a mid-rise office building sized (7 - 12 floors) and (2 out of 6) 33% were involved in relocating a high rise office building (13 stories and above).

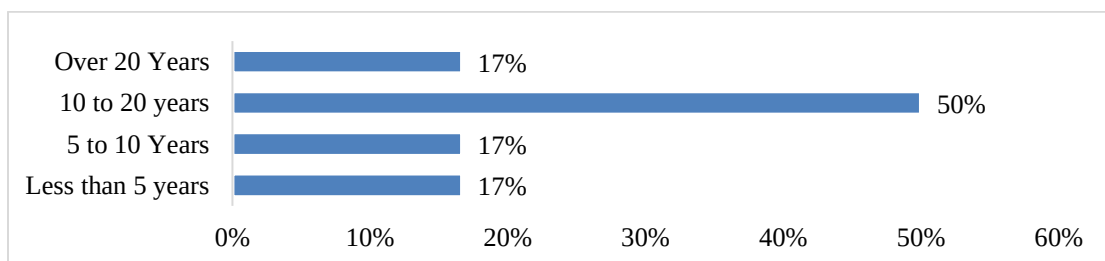


Figure 35 - facilities managers validators (experienced projects sizes)

6.1.4.4 Respondents opinion on the stakeholder's involvement in relocation processes

The respondents were given a table to identify each stakeholder's involvement over the three parent processes of relocation, according to the activities within each. Each process activity was explained to them, and they were questioned upon each of the proposed stakeholders' involvement. The responses were:

6.1.4.4.1. For the process (P1) initiate the pre-relocation activities

(6 out of 6) 100% all of FM respondents agreed that business managers, departmental unit heads, facilities Managers, financial analyst and a real estate agent must be involved, where (5 out of 6) 83% of respondents agreed that a planning engineer should be involved, (1 out of 6) 17% agreed that workplace tenants should be involved, (5 out of 6) 83% agreed that a human resources manager should be involved, (5 out of 6) 83% agreed that a design professional (an architect or a design firm) should be involved, (1 out of 6) 17% agreed that contractors should be involved, (3 out of 6) 50% agreed that suppliers should be involved and (4 out of 6) 67% agreed that service providers (outsourced hard and soft services) should be involved for the process (P1) initiate the pre-relocation activities. Where all respondents did not find a need to involve a quality inspector, safety inspector, security officer and the mover for the process (P1) initiate the pre-relocation activities.

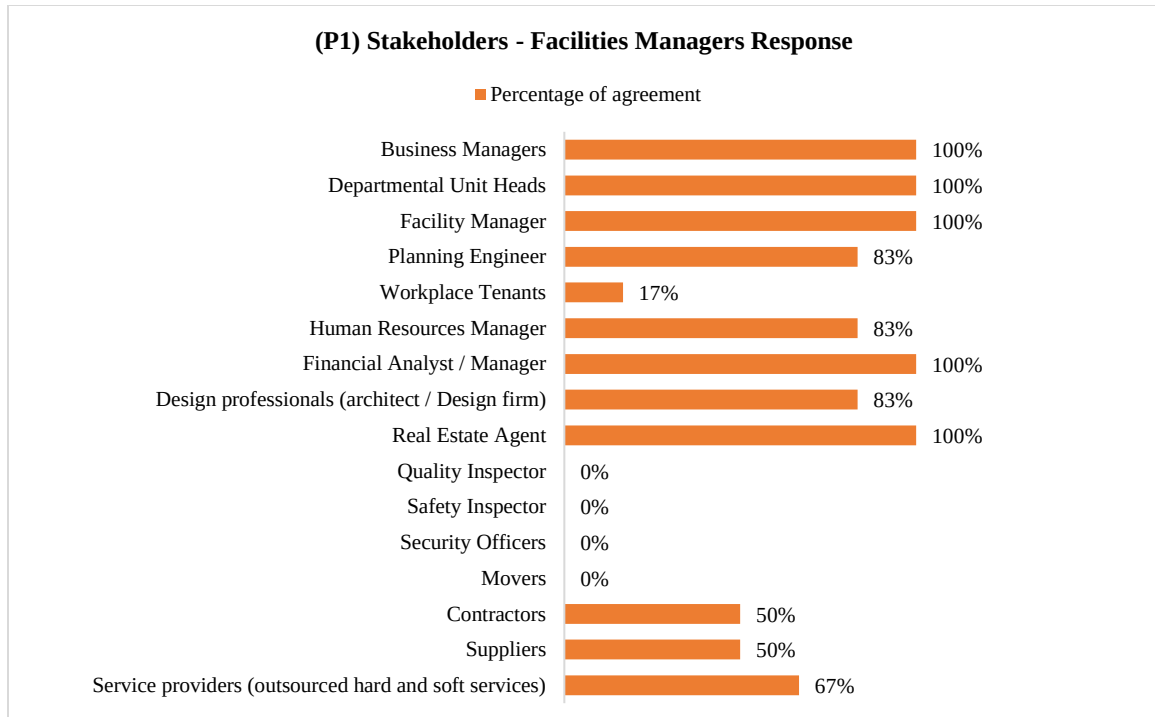


Figure 36 - Facilities managers' opinion on designations of stakeholders that should be involved in (P1)

6.1.4.4.2. For the process (P2) implement the relocation activities

(6 out of 6) 100% of all respondents agreed that a safety inspector, the mover, contractors and service providers (outsourced hard and soft services), where (2 out of 6) 33% agreed that business managers should be involved, (2 out of 6) 33% agreed that business managers should be involved, (3 out of 6) 50% agreed that departmental unit heads should be involved, (5 out of 6) 83% agreed that facilities managers should be involved, (3 out of 6) 50% agreed that a planning engineer should be involved, (4 out of 6) 67% agreed that workplace tenants should be involved, (3 out of 6) 50% agreed that human resources manager should be involved, (1 out of 6) 17% agreed that a financial analyst should be involved, (3 out of 6) 50% agreed that a design professional (an architect or a design firm) should

be involved, (5 out of 6) agreed that a quality inspector should be involved, (5 out of 6) 83% agreed that a security officer should be involved and (5 out of 6) 83% agreed that suppliers should be involved for the process (P2) implement the relocation activities. Where all respondents did not find a need to involve a real estate agent for the process (P2) Implement the Relocation Activities.

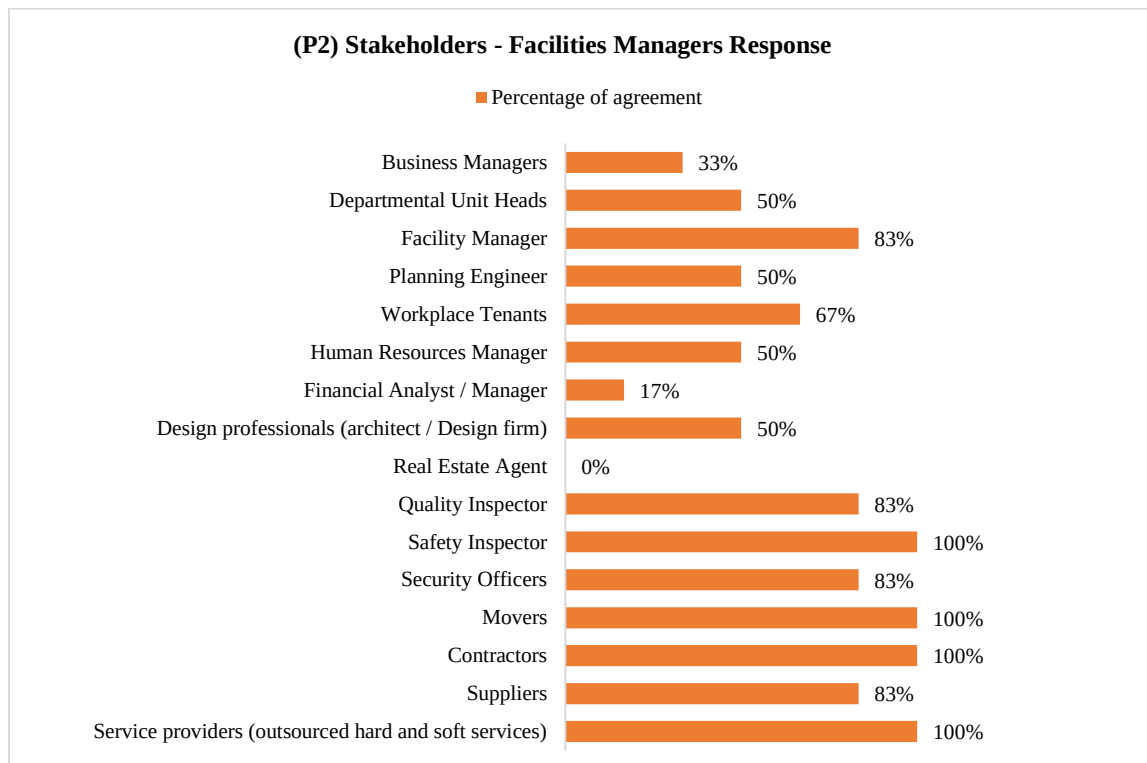


Figure 37 - Facilities managers' opinion on designations of stakeholders that should be involved in (P2)

6.1.4.4.3. For the process (P3) conduct the post-relocation activities

(2 out of 6) 33% of respondents agreed that business managers, departmental unit heads and a design professional (an architect or a design firm) should be involved, where (2 out of 6) 33% agreed that should be involved, (5 out of 6) 83% agreed that facility manager should be involved, (1 out of 6) 17% agreed

that a planning engineer should be involved, (4 out of 6) 67% agreed that workplace tenants should be involved, (4 out of 6) 67% agreed that human resources manager should be involved, (5 out of 6) 83% agreed that a quality inspector, safety inspector and security officers should be involved, (1 out of 6) 17% agreed that the mover should be involved, (2 out of 6) 33% agreed that contractors should be involved, (3 out of 6) 50% agreed that suppliers should be involved and (4 out of 6) 67% agreed that service providers (outsourced hard and soft services) should be involved for the process (P3) conduct the post-relocation activities. All respondents did not find a need to involve a real estate agent for the process (P3) conduct the post-relocation activities.

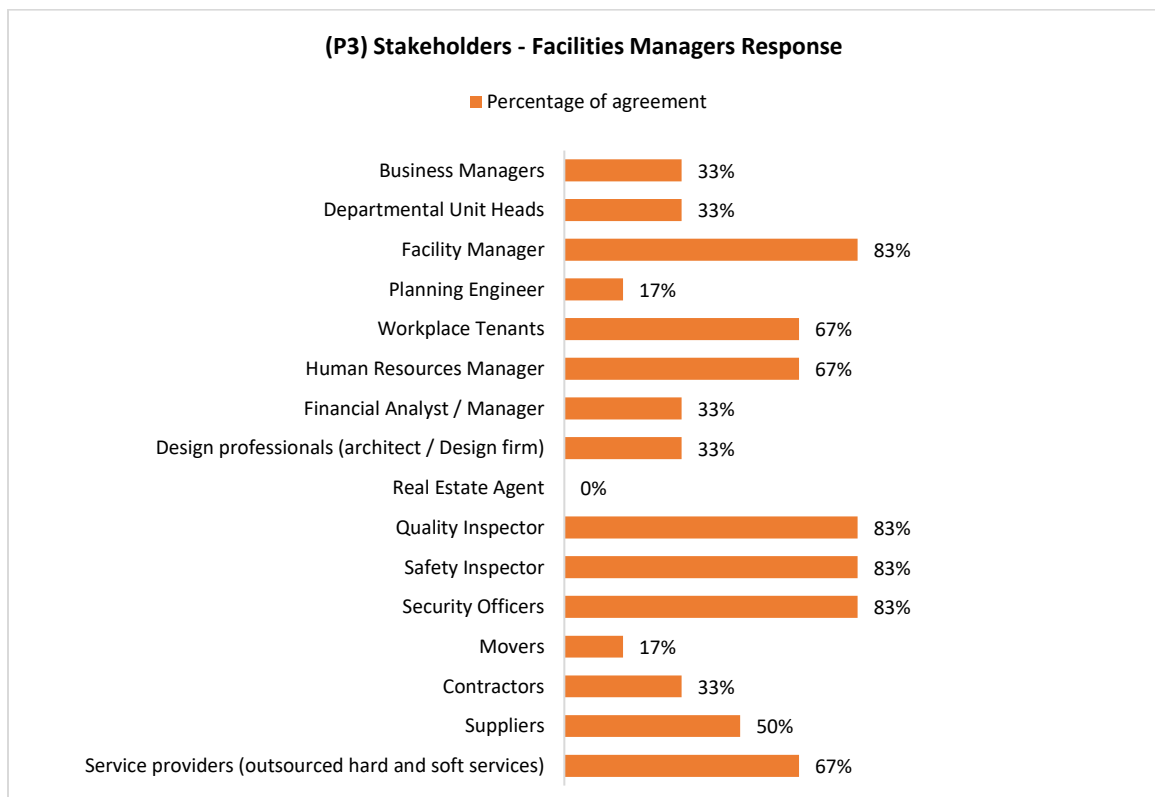


Figure 38 - Facilities managers' opinion on designations of stakeholders that should be involved in (P3)

6.1.4.5 Respondents opinion on the documents needed for the effective planning, implementation and occupancy of workplace organizational relocation

The respondents were given a table to identify proposed documents over the three parent processes of relocation according to the activities in each. Each process activity was expressed, and the respondents were questioned upon the proposed required documents to manage relocation activities and the responses were:

6.1.4.5.1. For the process (P1) initiate the pre-relocation activities

(6 out of 6) 100% of respondents agreed that a document of business statement of needs (listing the financial status, technical and functional requirements for better service provision) is needed, Where (5 out of 6) 83% agreed that the regulatory approvals, legislative approvals should be obtained, (5 out of 6) 83% agreed that there should be a document comparing the relocation options (financially, technically and functionally), (6 out of 6) 100% agreed that business manager approval (documents and letters) should be obtained, (5 out of 6) 83% agreed that a complete and coordinated design documents should be obtained, (4 out of 5) 67% agreed that contracts of selected service providers (outsourced soft services and hard services) should be formulated, (2 out of 6) 33% agreed that a relocation plan (charter, scope, milestones, etc.) document should developed, (3 out of 6) 50% agreed that move schedules should be developed, (6 out of 6) 100% agreed that an approved detailed budget should be allocated and documented, (2 out of 6) 33% agreed that move check lists (packaging, allocation, assigning tasks, list of moveable assets, etc.) should be prepared, (3 out of 6) 50% agreed that a

quality management plan should be prepared and approved, (2 out of 6) 33% agreed that a workplace health and safety plan and workplace maintenance plan should be formulated for the process (P1) Initiate the Pre-relocation Activities. Where (6 out of 6) a 100% of all respondents did not perceive a need for: a post-relocation checklist (premises compliance to relocation plan), recording lessons learned in a register, did not agree that it is adequate to prepare an as built records for the process (P1) initiate the pre-relocation activities.

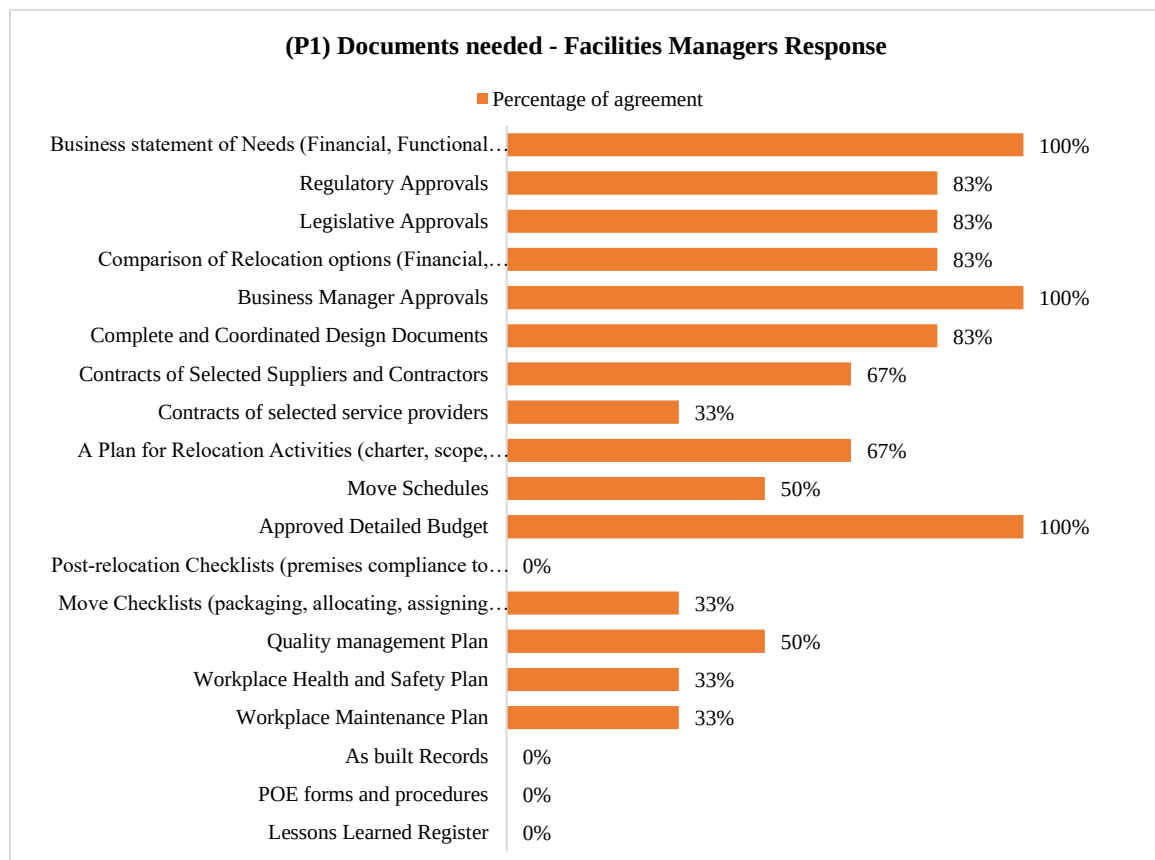


Figure 39 - Facilities managers' opinion on documents that should be involved in (P1)

6.1.4.5.2. For the process (P2) implement the relocation activities

(1 out of 6) 17% of respondents agreed that a document of business statement of needs (listing the financial status, technical and functional requirements for better service provision) is needed, Where (2 out of 6) 33% agreed that the regulatory and legislative approvals should be obtained, (1 out of 6) 17% agreed that a document comparing the relocation options (financially, technically and functionally) should be made available, (5 out of 6) 67% agreed that business manager approval (documents and letters) should be obtained, (3 out of 6) 50% agreed that a complete and coordinated design documents should be made available, (4 out of 5) 67% agreed that contracts of suppliers and contractors and contracts of selected service providers (outsourced soft services and hard services) should be formulated, (3 out of 6) 50% agreed that a relocation plan (charter, scope, milestones, etc.) document should be made available, (6 out of 6) 100% agreed that move schedules should be developed and made available, (2 out of 6) 33% agreed that an approved detailed budget should be allocated and documented, (3 out of 6) 50% agreed that post relocation checklists (premises compliance to relocation plan) should be made available, (5 out of 6) 83% agreed that move check lists (packaging, allocation, assigning tasks, list of moveable assets, etc.) should be prepared and made available, (6 out of 6) 100% agreed that a quality management plan should be prepared and approved, (5 out of 6) 83% agreed that a workplace health and safety plan and workplace should be formulated and (4 out of 6) 67% agreed that a workplace maintenance plan should developed, where (2 out of 6) 33% agreed that as build records and POE forms and procedures (level of efforts) should be made

available for the process (P2) implement the relocation activities. Where (6 out of 6) 100% of all respondents did not see a need for lessons learned register for the process (P2) Implement the Relocation Activities.

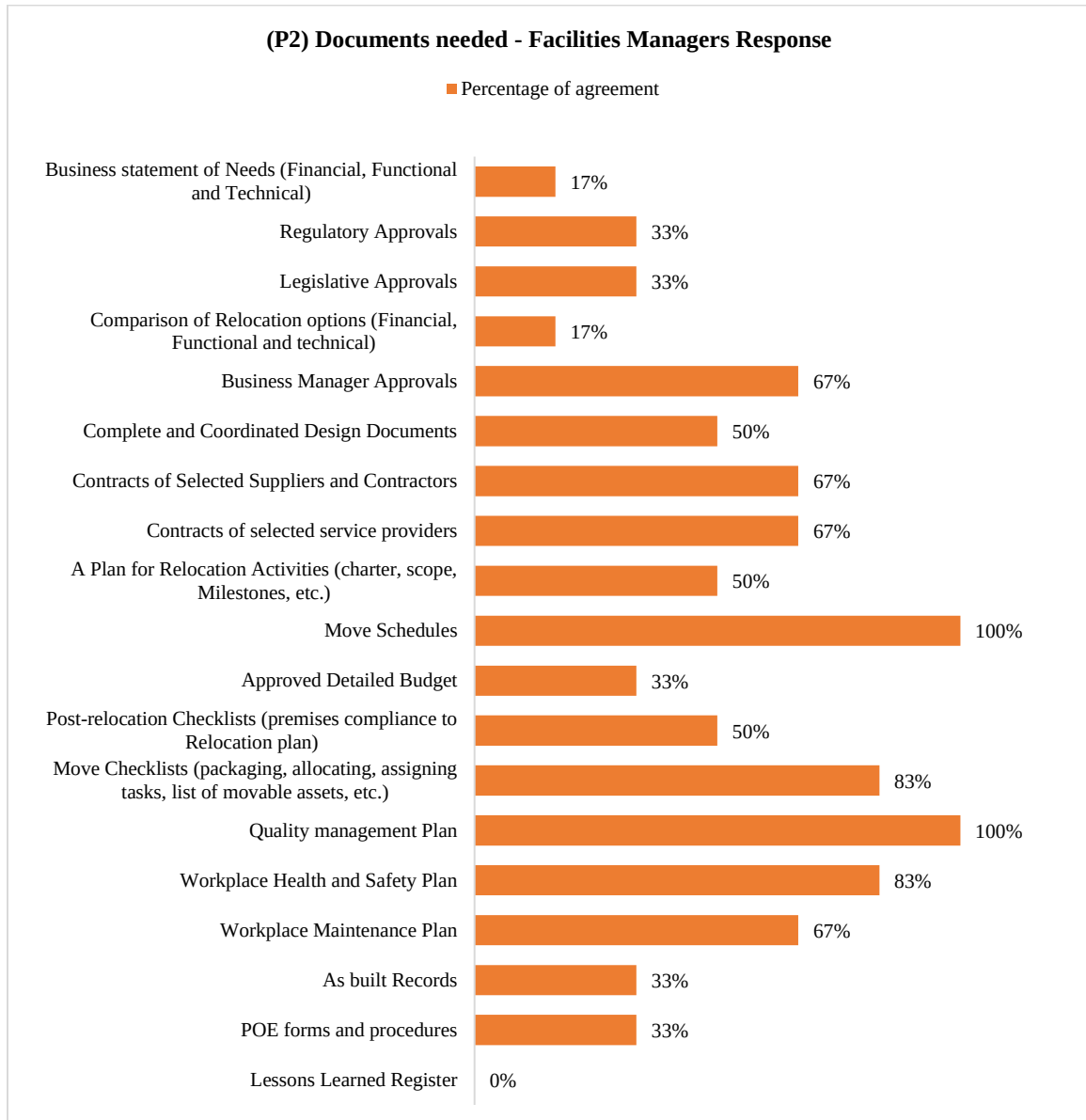


Figure 40 - Facilities managers' opinion on documents that should be involved in (P2)

6.1.4.5.3. For the process (P3) conduct the post-relocation activities

(1 out of 6) 17% of respondents agreed that business statement, approved detailed design documents and move checklists should all be made available, where (2 out of 6) 33% agreed that regulatory approvals should be obtained, (3 out of 6) 50% agreed that legislative approvals should be obtained, (4 out of 6) 67% agreed that business manager approvals should be made available, (2 out of 6) 33% agreed that contracts of selected suppliers, contractors and service providers (outsourced soft and hard services) should be made available, (1 out of 6) 17% agreed that approved detailed budget should be made available, (4 out of 6) 67% agreed that post-relocation checklists should be made available, (1 out of 6) 17% agreed that move checklists should be made available, (5 out of 6) 83% agreed that quality management plan should be formulated, (4 out of 6) 67% agreed that workplace health and safety plan and maintenance plan documents should be made available, (5 out of 6) 83% agreed that as built drawings should be made available and (6 out of 6) 100% all respondents agreed that post-occupancy evaluation (POE) forms and procedures and lessons learned register must be available for the process (P3) conduct the post-relocation activities. Where all respondents agreed that there is no need for the document comparing relocation options, complete and coordinated design documents, plan for relocation activities (charter, scope, milestones, etc.) and move schedules to be made available for the process (P3) conduct the post-relocation activities.

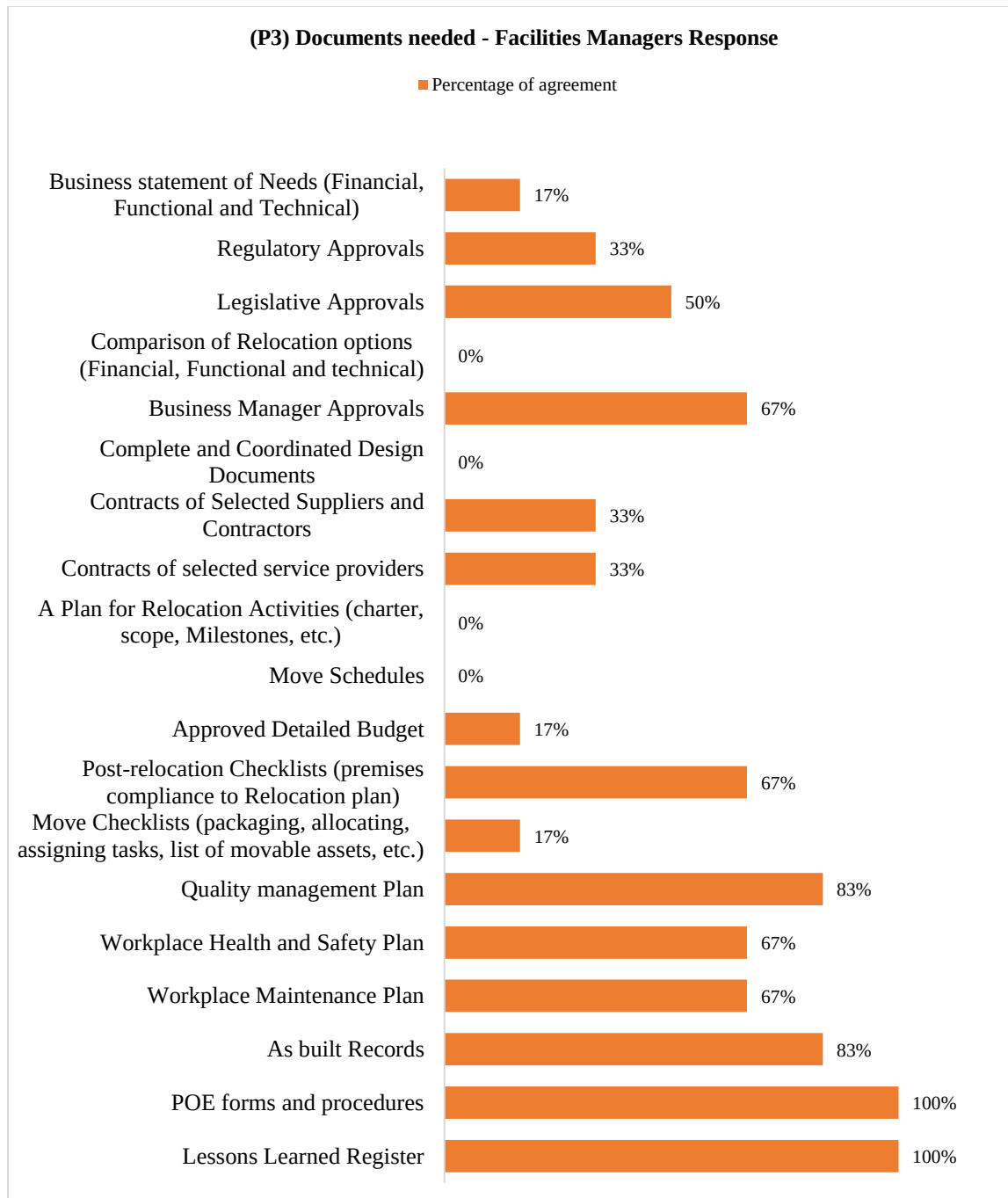


Figure 41 - Facilities managers' opinion on documents that should be involved in (P3)

6.1.4.6 Validation of activities in the organizational workplace relocation phases

The respondents were asked to assess and validate the importance of the framework activities over the workplace relocation phases and the importance index was calculated using equation (1.3) in chapter one.

The rates of importance were determined according to the ranges specified in chapter one. Tables 9 and 10 show the activities of the framework, their importance index, the rate of importance and the validation question about if the organization that the respondent represent performs it during relocation of workplaces or not.

Facilities managers responses for validation of the framework					
Process activity ID	Phase and activity description	Importance Index	Rate of Importance	Do you perform this function in your organization in times of relocation of workplace? (Yes) or (No)	
P1	Initiate the pre-relocation activities	89.6%	Extremely Important	97.2% (Yes)	
P1.1	Analyze Business Needs for Relocation	83.3%	Very Important	100%	-
P1.2	Assess the Condition of Existing Facilities	79.2%	Very Important	100%	-
P1.3	Assess Relocation Options	87.5%	Extremely Important	83.3%	16.7%
P1.4	Plan for Relocation	91.7%	Extremely Important	100%	-
P1.5	Allocate Budget for Relocation Activities	100.0%	Extremely Important	100%	-
P1.6	Design the New Premises	95.8%	Extremely Important	100%	-

Table 26 - Facilities managers' responses for validation of the framework – 1

Facilities managers responses for validation of the framework					
Process activity ID	Phase and activity description	Importance Index	Rate of Importance	Do you perform this function in your organization in times of relocation of workplace? (Yes) or (No)	
P2	Implement the relocation activities	71.5%	Very Important	100% (Yes)	
P2.1	Prepare Work Packages	79.2%	Very Important	100%	-
P2.2	Select Contractors, Suppliers & Service Providers	83.3%	Very Important	100%	-
P2.3	(Lease/Own/Construct) & Fitout the New Premises	75.0%	Very Important	100%	-
P2.4	Announce Relocation Activities	62.5%	Very Important	100%	-
P2.5	Implement the Move	66.7%	Very Important	100%	--
P2.6	Evaluate Compliance to Relocation Plan	62.5%	Very Important	100%	
P3	Conduct the post-relocation activities	72.9%	Very Important	91.7% (Yes)	
P3.1	Establish a Workplace Health and Safety Plan	79.2%	Very Important	100%	-
P3.2	Develop and Initiate Workplace Maintenance plan	75.0%	Very Important	100%	-
P3.3	Develop and Maintain record keeping procedures	62.5%	Very Important	83.3%	16.7 %
P3.4	Conduct Post Occupancy Evaluations	75.0%	Very Important	83.3%	16.7 %

Table 27 - Facilities managers' responses for validation of the framework - 2

6.1.4.5.4. For the process (P1) initiate the pre-relocation activities

The average evaluation of the six activities in the initiation of relocation process (P1) is found to be ‘Extremely Important’ . Where the average importance index was 89.6% and the table 9 shows how the facilities managers respondents evaluated importance of the (P1) activities. The respondents’ average agreement on the process is found to be 97.2% on the average of all activities applicable to their workplace relocation practice. This positively indicates that the framework modeled the professional practice almost comprehensively.

The respondents’ evaluated the activity (P1.1) analyze business needs for relocation as ‘Very Important’ by 83.3%. where activities, (P1.2) Assess the condition of existing facilities is found to be ‘very Important’ by 79.2%. (P1.3) Assess relocation options is found to be ‘Extremely Important’ by 87.5%, (P1.4) Plan for relocation is found to be ‘Extremely important’ by 91.7%, (P1.5) Allocate budget for Relocation is found to be ‘Extremely Important’ by all respondents 100%, (P1.6) Design the new premises is found to be ‘Extremely Important’ by 95.8%. The respondents’ agreement on their organization practice of process activities (P1.1), (P1.2), (P1.4), (P1.5) and (P1.6) is found to be 100% for each, in times of workplace relocation; thus, the framework is applicable to their organization workplace relocation practice. Where (P1.3) activity is agreed upon by 83.3% to be practiced in their organizations in times of relocation.

6.1.4.5.5. For the process (P2) implement the relocation activities

The average evaluation of the six activities in the implementation of relocation process (P2) is found to be ‘Very Important’ . Where the average importance index was 71.5% and the table 10 shows how the respondents evaluated (P2) activities importance. The respondents average agreement on the process is found to 100% applicable to their workplace relocation practice

The respondents’ evaluated the activity (P2.1) prepare work packages as ‘Very Important’ by 79.2%. Where activities, (P2.2) select contractors, suppliers and service providers is found to be ‘Very Important’ by 83.3%, (P2.3) acquire and fit-out the new premises is found to be ‘Very Important’ by 75%, (P2.4) announce relocation activities is found to be ‘Very Important’ by 62.5%, (P2.5) implement the Move is found to be ‘Very Important’ by 66.7%, (P2.6) evaluate compliance to relocation plan is found to be ‘Very Important’ by 62.5%. The respondents agreement on the practice of process activities (P2.1), (P2.2), (P2.3), (P2.4), (P2.5) and (P2.6) are found to be 100%; thus, it is applicable to their organization practice of workplace relocation.

6.1.4.5.6. For the process (P3) conduct the post-relocation activities

The average evaluation of the four activities in the conduct post relocation activities process (P3) is found to be ‘Very Important’. Where the average importance index was 72.9% and the table 10 shows how the facilities managers’ respondents evaluated (P3) activities importance. The respondents’ average agreement on the process is found to 91.7% applicable to their workplace relocation

practice. The respondents evaluated the activity (P3.1) establish a workplace health and safety (WHS) plan as 'Very Important' by 79.2%. Where activities, (P3.2) develop and initiate workplace maintenance plan is found to be 'Very Important' by 75%, (P3.3) develop and maintain record keeping procedures is found to be 'Very Important' by 62.5%, (P3.4) conduct post occupancy evaluation is found to be 'Very Important' by 75%. The respondents agreement on the practice of process activities (P3.1) and (P3.2), are found to be 100%; thus, it is applicable to their organization practice of workplace relocation. Where for activities (P3.3) and (P1.4) the respondents agreed by 83.3% to be practiced in their organizations; thus, it is applicable to their organization practice of workplace relocation.

6.1.5 Real-estate managers validation of the framework

6.1.5.1 Part one: general information (respondents names and organizations)

Reference	Name	Position	Organization	Email
RM1	Mr. Shamsuddin	Real Estate and security manager	Al Hugayet Group	shams@alhugayet.com
RM2	Mr. Esam Munadher	Real Estate manager	Dhahran Techno Valley	esam.munadher@dtvc.com.sa
RM3	Mr. Hazem Al Afranji	Real Estate and properties manager	Al Saeed Holding tower	hazem@mashco.com.sa
RM4	Mr. Khaled Ashmawi	Real Estate investments Analyst	Jones Lang Lasalle (JLL)	k.ashmawi@gmail.com
RM5	Mr. Saleh Al Nahdi	Real Estate corporate owner	Al Nahdi Real Estate owner	saleh@nahdi.com
RM6	Mr. Adel Mohamed	Properties and maintenance manager	Al Subaiey towers	eamm@mail.com

Table 28 - FM validators (respondents names and organizations)

6.1.5.2 Respondents years of experience

The years of experience were classified into four main categories: 'Less than 5 years', '5-10 years', '10-20 years' and 'Over 20 years'. The respondents answers show that (1 out of 6) 17% were of over 20 years' experience, where (3 out of 6) 50% of respondents were between 10 to 20 years of experience, (1 out of 6) 17% of respondents had 5 to 10 years of experience and (1 out of 6) 17% had less than 5 years of experience.

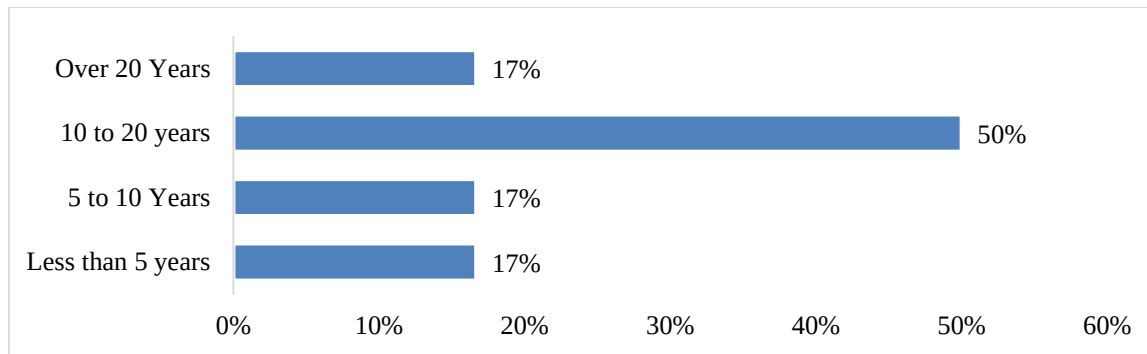


Figure 42 – Real-estate managers validators (years of experience)

6.1.5.3 Respondents experienced involvement in relocation projects

All the respondents were involved at least once in a relocation project or more through their years of experience; which assure that they have been through different cases of workplaces relocation and capable of justifying descriptively the processes and activities needed to relocate an organization from a location A to a location B. The results shown that (4 out of 6) 67% were involved in relocating a low-rise office building sized (1 - 6 floors), where (3 out of 6) 50% were involved in relocating a mid-rise office building sized (7 - 12 floors) and (3 out of 6) 50% were involved in relocating a high rise office building (13 stories and above).

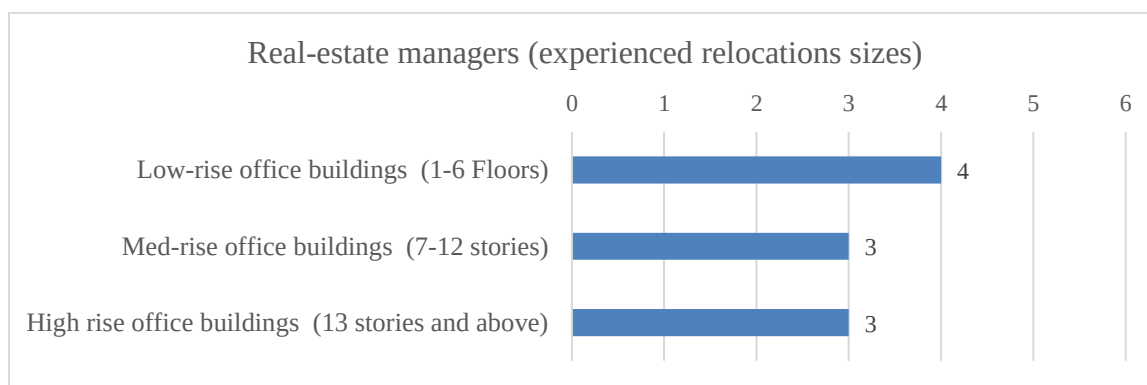


Figure 43 - Real-estate managers validators (experienced relocations sizes)

6.1.5.4 Respondents opinion on the stakeholder's involvement in relocation processes

The respondents were given a table to identify the involvement of each stakeholder over the three parent processes of relocation according to the activities in each. I have expressed each process activity and questioned each of the proposed stakeholders involvement and the responses were:

6.1.5.4.1. For the process (P1) initiate the pre-relocation activities

(6 out of 6) 100% all of real estate managers (REM) respondents agreed that business managers and facilities managers must be involved, where (4 out of 6) 67% agreed that departmental unit heads should be involved, (2 out of 6) 33% of respondents agreed that a planning engineer should be involved, (2 out of 6) 33% agreed that workplace tenants should be involved, (3 out of 6) 50% agreed that a human resources manager should be involved, (5 out of 6) 83% agreed that a financial analyst should be involved, (4 out of 6) 67% agreed that a design professional (an architect or a design firm) should be involved, (4 out of 6) 67% agreed that real estate agent should be involved, (1 out of 6) 17% agreed that security officer should be involved contractors should be involved, (4 out of 6) 67% agreed that suppliers should be involved and (1 Out of 6) 17% agreed that service providers (outsourced hard and soft services) should be involved for the process (P1) initiate the pre-relocation activities. Where all respondents did not find a need to involve a quality inspector, safety inspector and the mover for the process (P1) initiate the pre-relocation activities.

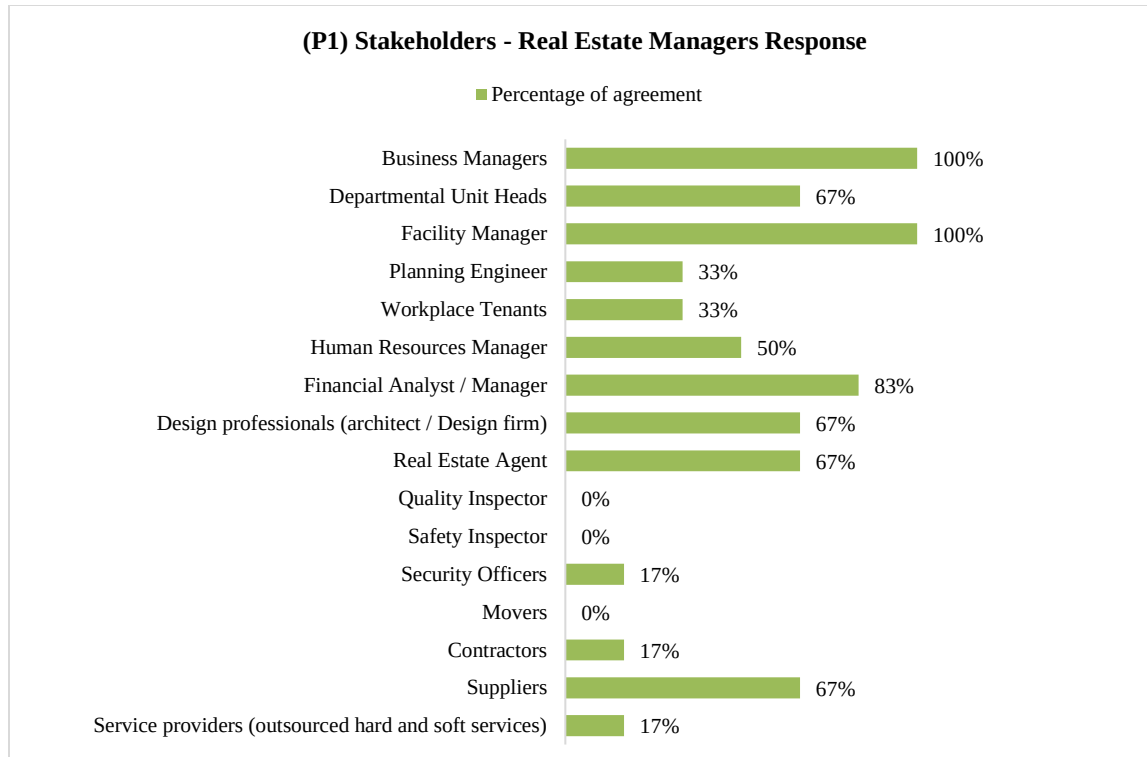


Figure 44 - Real-estate managers respondents' opinion on the stakeholder's involvement in (P1)

6.1.5.4.2. **For the process (P2) implement the relocation activities**

(6 out of 6) 100% of all real estate managers (REM) respondents agreed that the mover and facilities manager should be involved, where (4 out of 6) 67% agreed that business managers should be involved, (5 out of 6) 83% agreed that departmental unit heads should be involved, (1 out of 6) 17% agreed that a planning engineer should be involved, (1 out of 6) 17% agreed that a real estate agent should be involved, (2 out of 6) 33% agreed that workplace tenants should be involved, (1 out of 6) 17% agreed that human resources manager should be involved, (3 out of 6) 50% agreed that a financial analyst should be involved, (4 out of 6) 67% agreed that a quality inspector should be involved, (4 out of 6) 67% agreed that a safety inspector should be involved, (4 out of 6) 67% agreed that a security officer should be involved, (3 out of 6) 50% agreed that suppliers should be involved and (3 out of 6) 50% agreed that service providers (outsourced soft

and hard services) should be involved for the process (P2) implement the relocation activities. Where all respondents did not find a need to involve a design professional (an architect or a design firm) for the process (P2) implement the relocation activities.

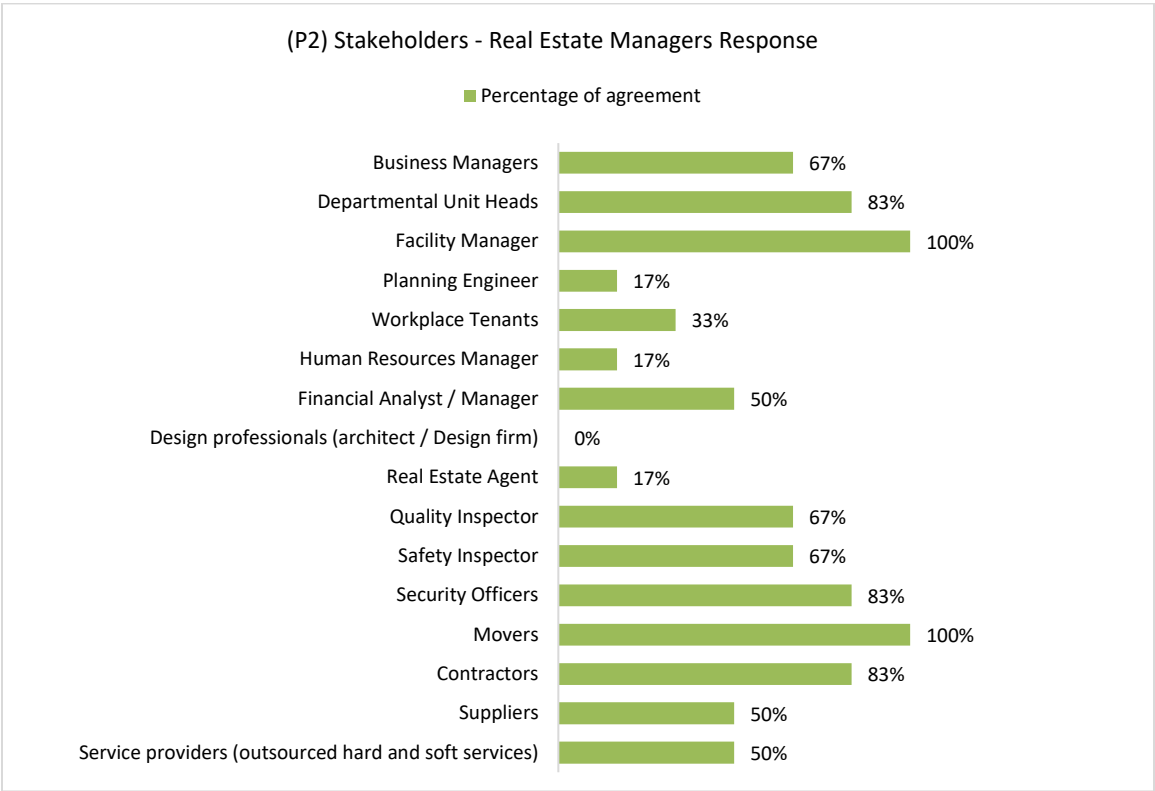


Figure 45 – Real-estate managers respondents’ opinion on the stakeholder’s involvement in (P2)

6.1.5.4.3. **For the process (P3) conduct the post-relocation activities**

(6 out of 6) 100% of all real estate managers (REM) respondents agreed that the facilities manager should be involved, where (4 out of 6) 67% agreed that business managers should be involved, (3 out of 6) 50% agreed that departmental unit heads should be involved, (1 out of 6) 17% agreed that a planning engineer should be involved, (1 out of 6) 17% agreed that a real estate agent should be involved, (2 out of 6) 33% agreed that workplace tenants should be involved, (2 out of 6)33% agreed that human resources manager should be involved, (3 out of 6) 50% agreed

that a financial analyst should be involved, (4 out of 6) 67% agreed that a quality Inspector should be involved, (4 out of 6) 67% agreed that a safety inspector should be involved, (5 out of 6) 83% agreed that a security officer should be involved, (2 out of 6) 33% agreed that suppliers should be involved and (3 out of 6) 50% agreed that service providers (outsourced soft and hard services) should be involved for the process (P3) conduct the post-relocation activities. Where all respondents did not find a need to involve the movers, contractors and design professional (an architect or design firm) for the process (P3) conduct the post-relocation activities.

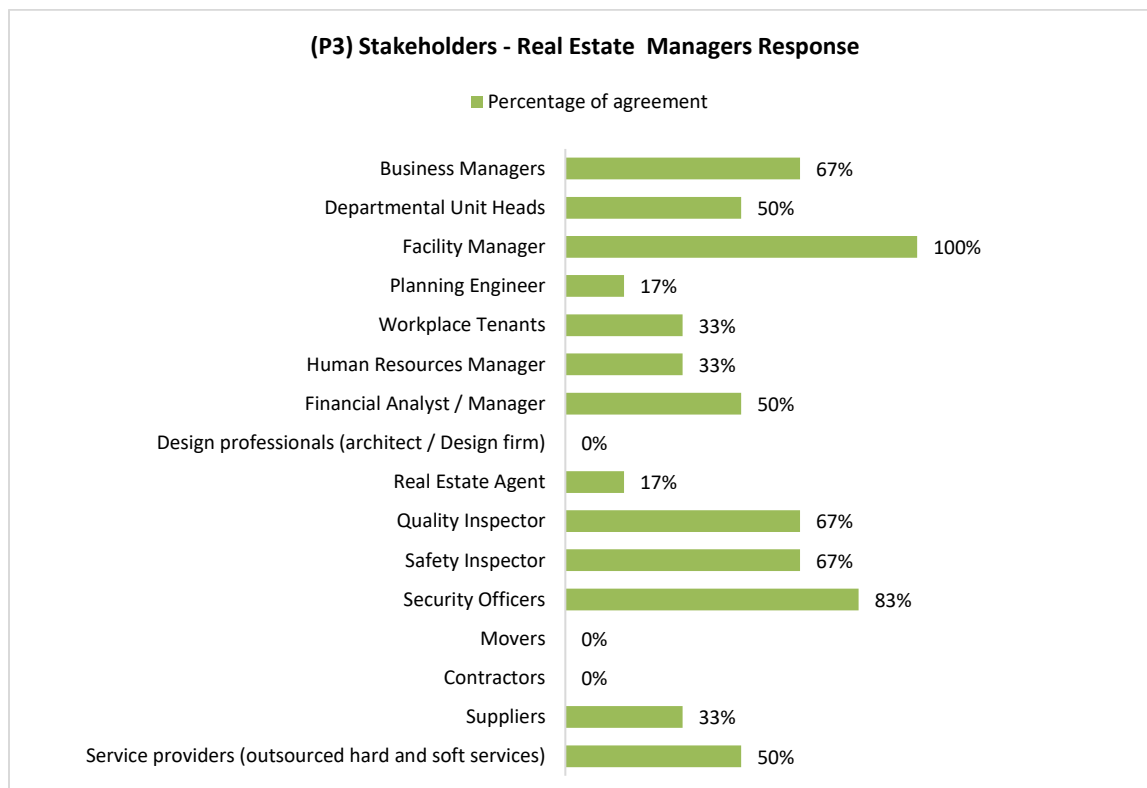


Figure 46 - Real estate managers respondents' opinion on the stakeholder's involvement in (P3)

6.1.5.5 Respondents' opinion on the documents needed for the effective planning, implementation and occupancy of workplace organizational relocation

The respondents were given a table to identify proposed documents over the three parent processes of relocation according to the activities in each. For each respondent each process activity was expressed and questioned upon the need for the proposed document and the responses were:

6.1.5.5.1. For the process (P1) initiate the pre-relocation activities

(5 out of 6) 83% of respondents agreed that a document of business statement of needs (listing the financial status, technical and functional requirements for better service provision) is needed, Where (4 out of 6) 67% agreed that the regulatory and legislative approvals should be obtained, (6 out of 6) 100% agreed that there should be a document comparing the relocation options (financially, technically and functionally), (6 out of 6) 100% agreed that business manager approval (documents and letters) should be obtained, (3 out of 6) 50% agreed that a complete and coordinated design documents should be obtained, (4 out of 6) 67% agreed that contracts of selected contractors, suppliers and service providers (outsourced soft services and hard services) should be formulated, (5 out of 6) 83% agreed that a relocation plan (charter, scope, milestones, etc.) document should developed, (5 out of 6) 83% agreed that move schedules should be developed, (6 out of 6) 100% agreed that an approved detailed budget should be allocated and documented, (1 out of 6) 17% agreed that move check lists (packaging, allocation, assigning tasks, list of moveable assets, etc.) should be prepared, (1 out of 6) 17% agreed that a quality management plan should be prepared and approved, (1 out of 6) 17% agreed that post relocation checklists (premises compliance to relocation plan) should be formulated, (2 out

of 6) 33% agreed that a workplace health and safety plan should be made available, (1 out of 6) 17% agreed that workplace maintenance plan should be formulated, (1 out of 6) 17% agreed that as built records should be made available, (2 out of 6) 33% agreed that POE forms should be made available and (1 out of 6) 17% agreed that lessons learned register should be made available for the process (P1) initiate the pre-relocation activities.

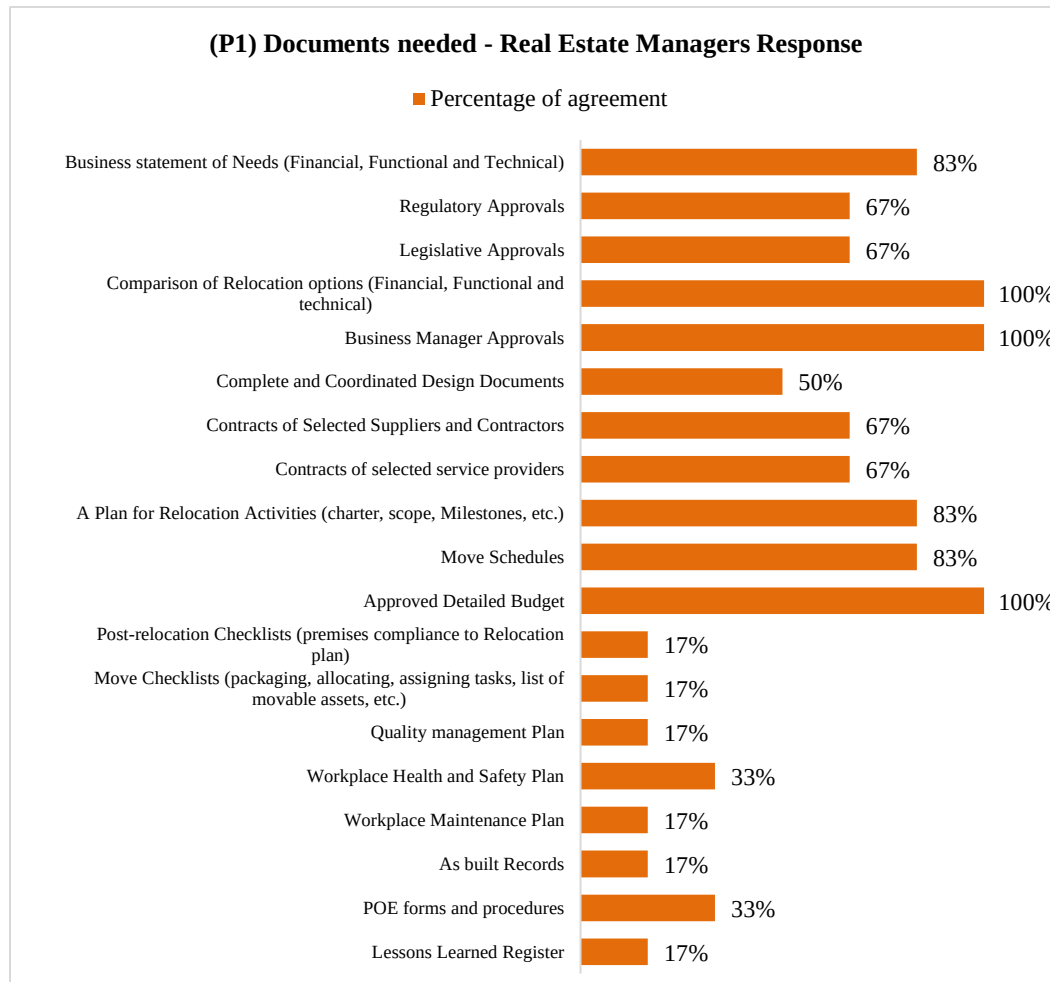


Figure 47 - Real estate managers respondents' opinion on the documents needed for (P1) activities

6.1.5.5.2. **For the process (P2) implement the relocation activities**

All of respondents did not find a need to have a document of business statement of needs (listing the financial status, technical and functional requirements for better service provision), Where (5 out of 6) 83% agreed that the regulatory and legislative approvals should be obtained,

all respondents agreed that there is not a need for a document comparing the relocation options (financially, technically and functionally), (2 out of 6) 33% agreed that business manager approval (documents and letters) should be obtained, (2 out of 6) 33% agreed that a complete and coordinated design documents should be obtained, (5 out of 6) 83% agreed that contracts of selected contractors, suppliers and service providers (outsourced soft services and hard services) should be made available, (5 out of 6) 83% agreed that a relocation plan (charter, scope, milestones, etc.) document should be made available, (5 out of 6) 83% agreed that move schedules should be made available, (2 out of 6) 33% agreed that an approved detailed budget should be allocated and documented, (4 out of 6) 67% agreed that move check lists (packaging, allocation, assigning tasks, list of moveable assets, etc.) should be prepared, (2 out of 6) 33% agreed that a quality management plan should be prepared and approved, (2 out of 6) 33% agreed that post relocation check lists (premises compliance to relocation plan) should be formulated, (1 out of 6) 17% agreed that a workplace health and safety plan should be made available, (2 out of 6) 33% agreed that workplace maintenance plan should be formulated, (1 out of 6) 17% agreed that as built records should be made available, (2 out of 6) 33% agreed that POE forms should be made available and (2 out of 6) 33% agreed that lessons learned register should be made available for the process (P2) implement the relocation activities.

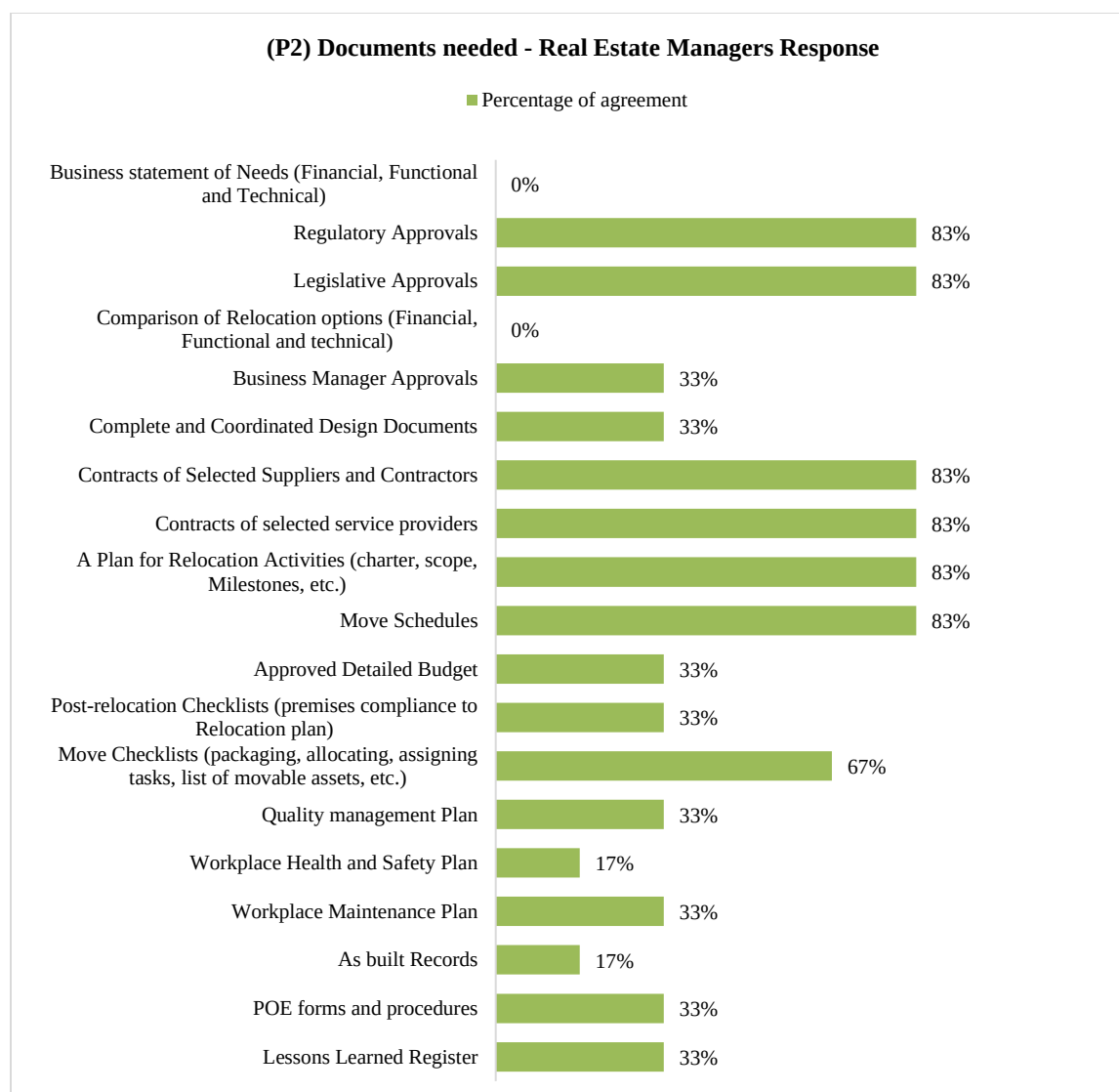


Figure 48 – Real-estate managers respondents’ opinion on the documents needed for (P2) activities.

6.1.5.5.3. For the process (P3) conduct the post-relocation activities

All of respondents did not find a need to have a document of business statement of needs (listing the financial status, technical and functional requirements for better service provision), Where (5 out of 6) 83% agreed that the regulatory approvals and legislative approvals should be obtained, All of respondents agreed that there is not a need for a document comparing the relocation options (financially, technically and functionally), (2 out of 6) 33% agreed that business manager approval (documents and letters) should be

obtained, (1 out of 6) 17% agreed that a complete and coordinated design documents should be obtained, (3 out of 6) 50% agreed that contracts of selected contractors and suppliers should be made available, (4 out of 6) 67% agreed that and contracts of service providers (outsourced soft services and hard services) should be formulated, All respondents agreed that there is no need for a relocation plan (charter, scope, milestones, etc.) document, (1 out of 6) 17% agreed that move schedules should be made available, all respondents agreed that there is not a need for an approved detailed budget, (2 out of 6) 33% agreed that move check lists (packaging, allocation, assigning tasks, list of moveable assets, etc.) should be prepared, (4 out of 6) 67% agreed that a quality management plan should be prepared and approved, (4 out of 6) 67% agreed that post relocation check lists (premises compliance to relocation plan) should be made available, (5 out of 6) 83% agreed that a workplace health and safety plan should be made available, (5 out of 6) 83% agreed that workplace maintenance plan should be formulated, (6 out of 6) 100% of respondents agreed that as built records should be finalized and made available, (2 out of 6) 33% agreed that post occupancy evaluation (POE) forms should be made available and (2 out of 6) 33% agreed that lessons learned register should be made available for the process (P3) conduct the post-relocation activities.

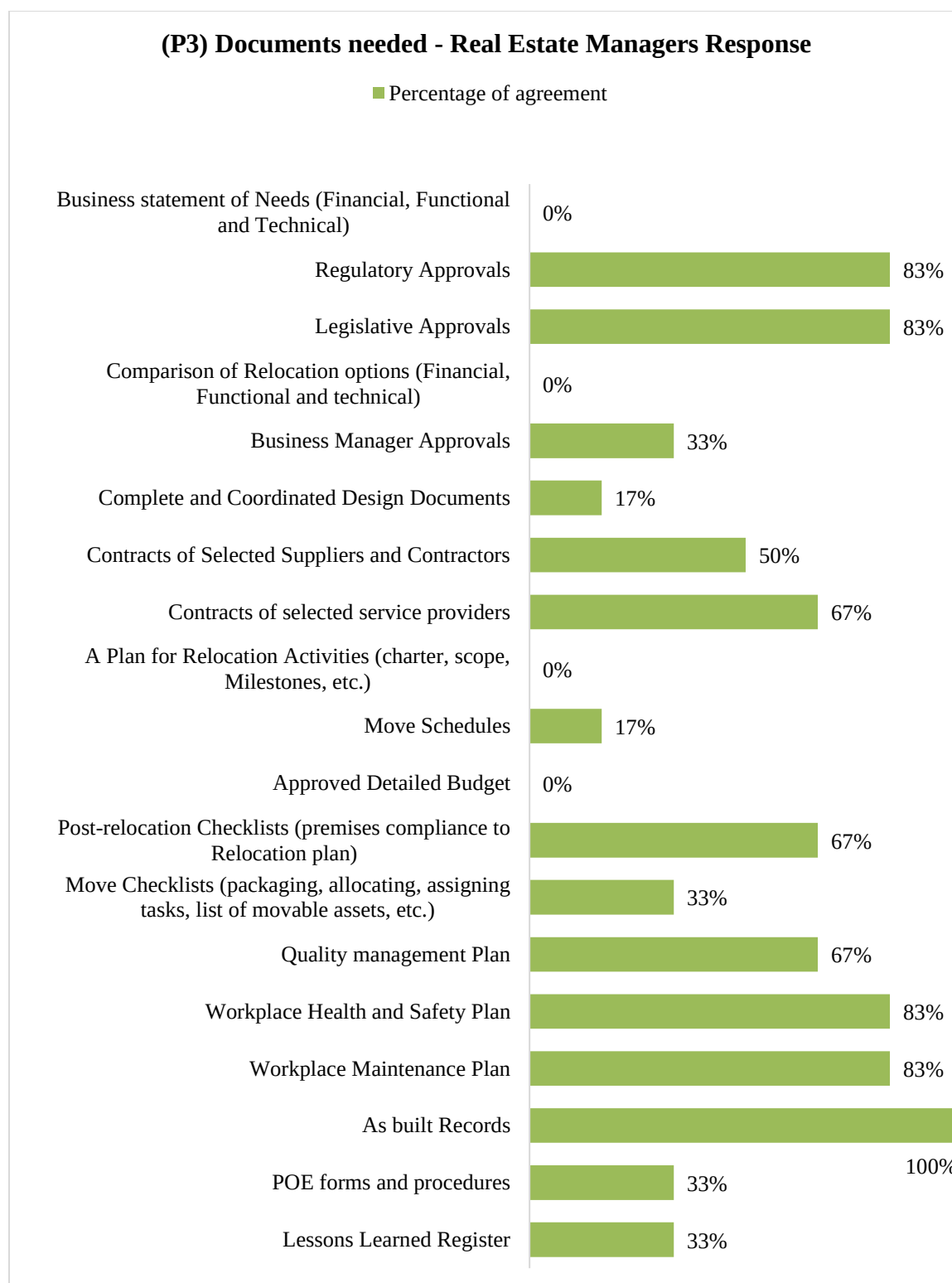


Figure 49 -Real-estate managers respondents' opinion on the documents needed for (P3) activities.

6.1.5.6 Validation of activities in the organizational workplace relocation phases

The respondents were asked to assess and validate the importance of the framework activities over the workplace relocation phases and the importance index was calculated using equation (1.3) in chapter one. The rates of importance were determined according to the ranges specified in chapter one. Tables 11 and 12 show the activities of the framework, their importance indices, the rate of importance and the validation question about if the organization that the respondent represent performs it during relocation of workplaces or not:

Real Estate Managers Responses for the Validation of the Framework					
Process /Activity ID	Phase and activity description	Importance Index	Rate of Importance	Do you perform this function in your organization in times of relocation of workplaces? (Yes) or (No)	
P1	Initiate the pre-relocation activities	79.9%	Very Important	83.3% (Yes)	
P1.1	Analyze business needs for relocation	91.7%	Extremely Important	66.7%	33.3%
P1.2	Assess the condition of existing facilities	79.2%	Very Important	66.7%	33.3%
P1.3	Assess relocation options	70.8%	Very Important	66.7%	33.3%
P1.4	Plan for relocation	79.2%	Very Important	100.0%	-
P1.5	Allocate budget for relocation activities	70.8%	Very Important	100.0%	-
P1.6	Design the new premises	87.5%	Extremely Important	100.0%	-

Table 29 - Real estate managers' responses for validation of the framework – 1

Real Estate Managers Responses for the Validation of the Framework					
Process /Activity ID	Phase and activity description	Importance Index	Rate of Importance	Do you perform this function in your organization in times of relocation of workplace? (Yes) or (No)	
P2	Implement the relocation activities	84.7%	Very Important	97.2% (Yes)	
P2.1	Prepare work packages	75.0%	Very Important	100.0%	-
P2.2	Select contractors, suppliers & service providers	95.8%	Extremely Important	100.0%	-
P2.3	Acquirement (lease/own/construct) and fit out the new premises	87.5%	Extremely Important	100.0%	-
P2.4	Announce relocation activities	79.2%	Very Important	100.0%	-
P2.5	Implement the move	87.5%	Extremely Important	100.0%	-
P2.6	Evaluate compliance to relocation plan	83.3%	Very Important	83.3%	16.7%
P3	Conduct the post-relocation activities	84.4%	Very Important	83.3% (Yes)	
P3.1	Establish a workplace health and safety plan	83.3%	Very Important	83.3%	16.7%
P3.2	Develop and initiate workplace maintenance plan	95.8%	Extremely Important	100.0%	-
P3.3	Develop and maintain record keeping procedures	91.7%	Extremely Important	83.3%	16.7%
P3.4	Conduct post occupancy evaluations	66.7%	Very Important	66.7%	33.3%

Table 30 - Real estate managers' responses for validation of the framework – 2

6.1.5.6.1. For the process (P1) initiate the pre-relocation activities

The average evaluation of the six activities in the initiation of relocation process (P1) is found to be ‘Very Important’. Where the average importance index was 79.9% and the table 11 shows how the respondents evaluated (P1) activities importance. The respondents’ average agreement on the process is found to 83.3% applicable to their workplace relocation practice.

The respondents evaluated the activity (P1.1) analyze business needs for relocation as ‘Extremely Important’ by 91.7%. Where activities, (P1.2) Assess the condition of existing facilities is found to be ‘very Important’ by 79.2%. (P1.3) Assess relocation options is found to be ‘ Very Important’ by 78.2%, (P1.4) Plan for relocation is found to be ‘Very important’ by 79.2%, (P1.5) Allocate budget for Relocation is found to be ‘Very Important’ by all respondents 70.8%, (P1.6) Design the new premises is found to be ‘Extremely Important’ by 87.5%. The respondents’ average agreement on the practice of process activities (P1.1), (P1.2), (P1.3) is found to be 66.7%, where (P1.4), (P1.5) and (P1.6) are found to be 100% practiced by their organization; thus, the framework is applicable to their organization workplace relocation practice.

6.1.5.6.2. For the process (P2) implement the relocation activities

The average evaluation of the six activities in the implementation of relocation process (P2) is found to be ‘Very Important’. Where the average importance index was 84.7% and the table 12 shows how the real estate managers’ respondents evaluated (P2) activities importance. The respondents’ average agreement on the process is found to be 97.2% that it is being performed in times of their workplace relocation and practice.

The respondents evaluated activity (P2.1) prepare work packages as ‘Very Important’ by 75%. Where activities, (P2.2) select contractors, suppliers and service providers is found to be ‘Extremely Important’ by 95.8%, (P2.3) acquire and fit-out the new premises is found to be ‘Extremely Important’ by 87.5%, (P2.4) announce relocation activities is found to be ‘Very Important’ by 79.2%, (P2.5) implement the move is found to be ‘Extremely Important’ by 87.5%, (P2.6) evaluate compliance to relocation plan is found to be ‘Very Important’ by 83.3%. The respondents’ agreement on the practice of process activities (P2.1), (P2.2), (P2.3), (P2.4) and (P2.5) are found to be 100% where (P2.6) is found to be by 83.3% practiced in their organization; thus, the framework process is applicable to their organization practice of workplace relocation.

6.1.5.6.3. For the process (P3) conduct the post-relocation activities

The average evaluation of the four activities in the conduct post relocation activities process (P3) is found to be ‘Very Important’. Where the average importance index was 84.4% and the table 12 shows how the respondents evaluated (P3) activities importance. The respondents’ average agreement on the process is found to 83.3% applicable to their workplace relocation practice.

The respondents evaluated activity (P3.1) establish a workplace health and safety (WHS) plan as ‘Very Important’ by 83.3%. Where activities, (P3.2) develop and initiate workplace maintenance plan is found to be ‘Extremely Important’ by 95.8%, (P3.3) develop and maintain record keeping procedures is found to be ‘Extremely Important’ by 91.7%, (P3.4) conduct post occupancy evaluation is found to be ‘Very Important’ by 66.7%. The respondents’ agreement on the practice of process activities (P3.1) is indicated to be practiced by 83.3% and (P3.2) is found to be 100% practiced by respondents’ organizations;

thus, it is applicable to their organization practice of workplace relocation. Where for activities (P3.3) is found to be practiced by 83.3% of respondents and (P1.4) by 66.7% is found to be practiced in their organizations; thus, the framework is applicable to their organization practice of workplace relocation.

6.1.6 Combined respondents validation

6.1.6.1 Respondents years of experience

The years of experience were classified into four main categories: ‘Less than 5 years’, ‘5- 10 years’, ‘10-20 years’ and ‘Over 20 years’. The respondents answers show that (3 out of 12) 25% were of over 20 years’ experience, where (6 out of 12) 50% of respondents were between 10 to 20 years of experience, (2 out of 12) 17% of respondents had 5 to 10 years of experience and (1 out of 12) 8% had less than 5 years of experience.

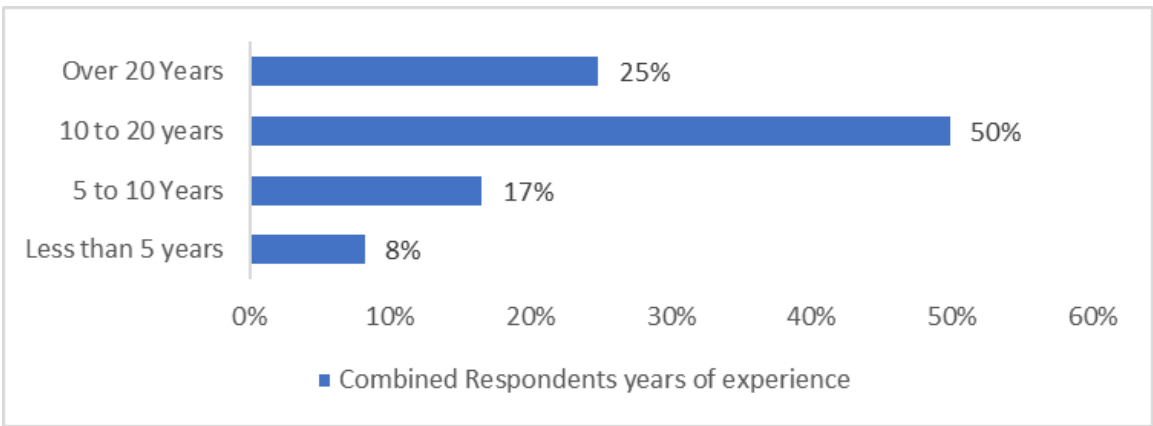


Figure 50- Validation (combined) respondents’ years of experience

6.1.6.2 Respondents involvement in relocation projects

All the respondents were involved at least once in a relocation project or more through their years of experience; which assure that they have been through different cases of workplaces relocation and capable of justifying descriptively the processes and activities needed to relocate an organization from a location A to a location B. The results shown that (8 out of 12) 67% were involved in relocating a low-rise office building sized (1 - 6 floors), where (7 out of 12) 58% were involved in relocating a mid-rise office building sized (7 - 12 floors) and (5 out of 12) 42% were involved in relocating a high rise office building (13 stories and above).

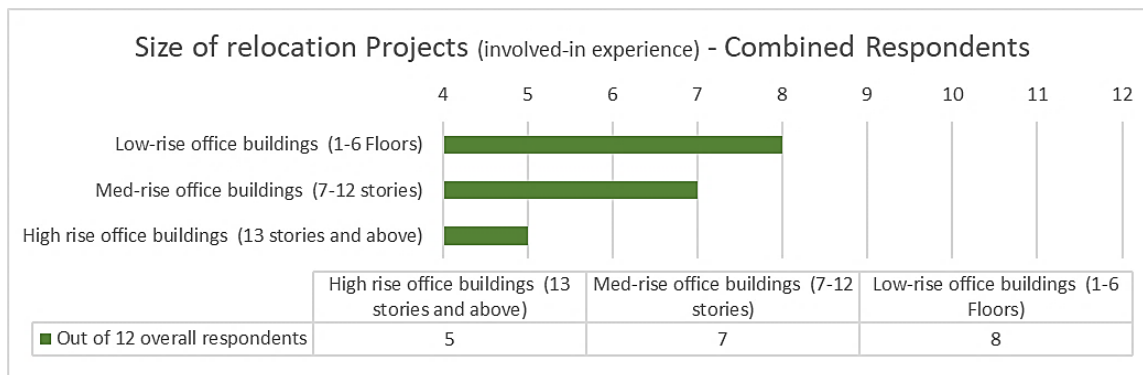


Figure 51 - Combined responses of validators (experienced relocations sizes)

6.1.6.3 Respondents opinion on the stakeholder's involvement in relocation processes

6.1.6.3.1. **For the process (P1) Initiate the Pre-relocation Activities**

100% of the respondents agreed upon the involvement of a business manager and facilities manager for the functions of “initiate the pre-relocation activities”. Where, 83% agreed about the involvement of a real estate agent; 75% agreed upon the need for departmental unit heads involvement and a 92% indicated that a financial analyst should be enrolled for the budgeting and reporting of business needs activities and all over the process to evaluate its feasibility from a

financial perspective. Where, 58% agreed on the need to have a planning engineer for the scheduling and planning of the process activities and for building bases forecasts for further processes. Where, 67% agreed upon the involvement of the human resources manager in the process. Further percentages are illustrated in figure 52.



Figure 52 - Overall (FMers and REMers) opinions upon stakeholders involvement in (P1)

6.1.6.3.2. **For the process (P2) Implement the Relocation Activities**

100% of the 64 respondents indicated that a mover should be involved for conduct of process (P1). Further, 92% agreed that a contractor should be involved, 67% agreed upon suppliers involvement and 83% agreed upon the involvement of a safety inspector and security officers for the conduct of (P2) process functions. Further percentages are

illustrated in figure 53.



Figure 53 - Overall (FMers and REMers) opinions upon stakeholders involvement in (P2)

6.1.6.3.3. **For the process (P3) Conduct the Post-Relocation activities**

92% agreed that a facilities manager should be involved for the conduct of the process (P3). Where 83% agreed upon the need for security officers to be involved. Further, 58% highlighted the need for involving service providers after relocation and occupation has been conducted. Further percentages are illustrated in figure 54.



Figure 54 - Overall (FMers and REMers) opinions upon stakeholders involvement in (P3)

6.1.6.4 Respondents opinion on the documents needed for the effective planning, implementation and occupancy of workplace organizational relocation

All the 64 respondents were asked upon the need for specific documents to be developed through the processes of relocation and its underlying functions. The frequencies of agreement upon the importance of these documents are indicated for each of the processes as:

6.1.6.4.1. For the process (P1) Initiate the Pre-relocation Activities

The respondents agreed by 50% upon the need for the documents identifying business statement of needs (financial, functional and technical), business manager approval and approved detailed budget. Where 42% of respondents agreed that there is a need for conducting regulatory approvals, legislative approvals and comparison of

relocation options in a documented manner. The figure 55 illustrates further percentages upon the needed documents for initiating the workplace relocation activities (P1).

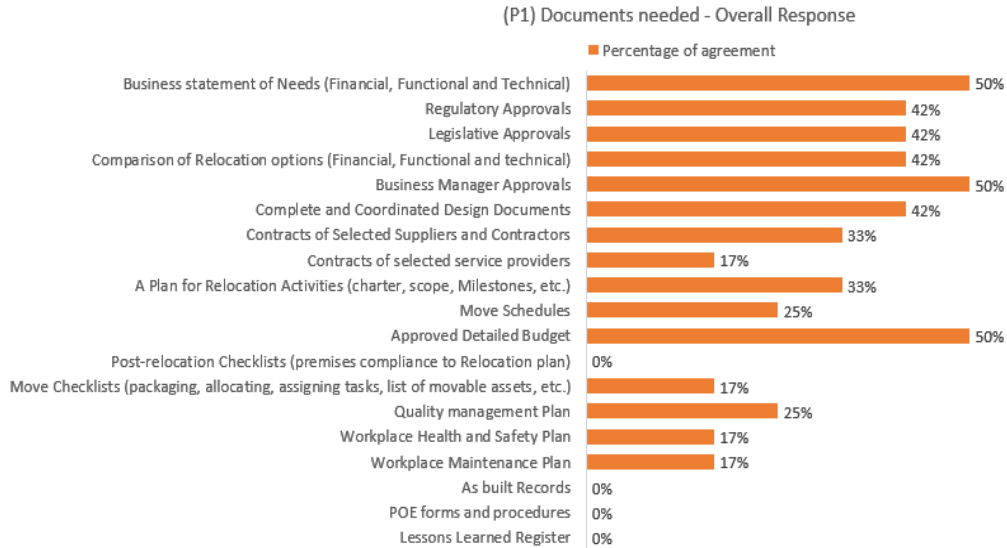


Figure 55 - Respondents (FMers and REMers) opinion upon the documents needed to supplement the functions of (P1)

6.1.6.4.2. For the process (P2) Implement the Relocation Activities

50% of the respondents agreed upon the need for documenting the relocation quality management plan and its move schedules. Further percentages are illustrated in figure 56.

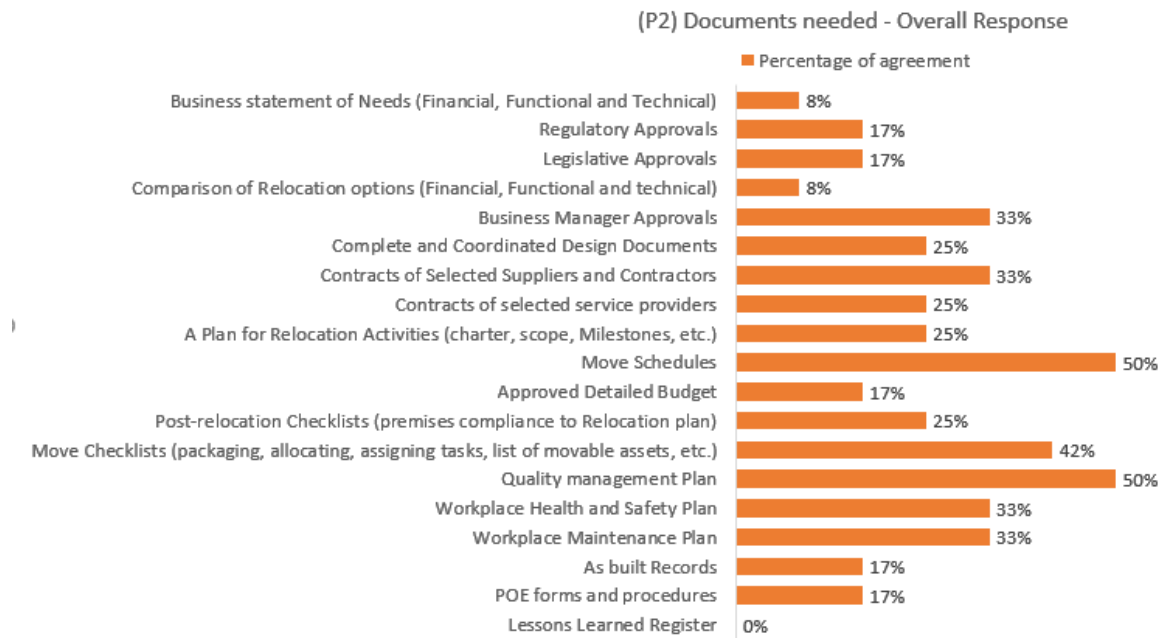


Figure 56 - Respondents (FMers and REMers) opinion upon the documents needed to supplement the function of (P2)

6.1.6.4.3. **For the process (P3) Conduct the Post-Relocation activities**

50% of the respondents indicated the need for making POE forms and procedures documents available for (P3) as well as the lessons learned from the relocation experience; this assists the organization to overcome future relocation risks and challenges based on actual experience. Where further percentages upon the required documents for relocation are demonstrated in figure 57.

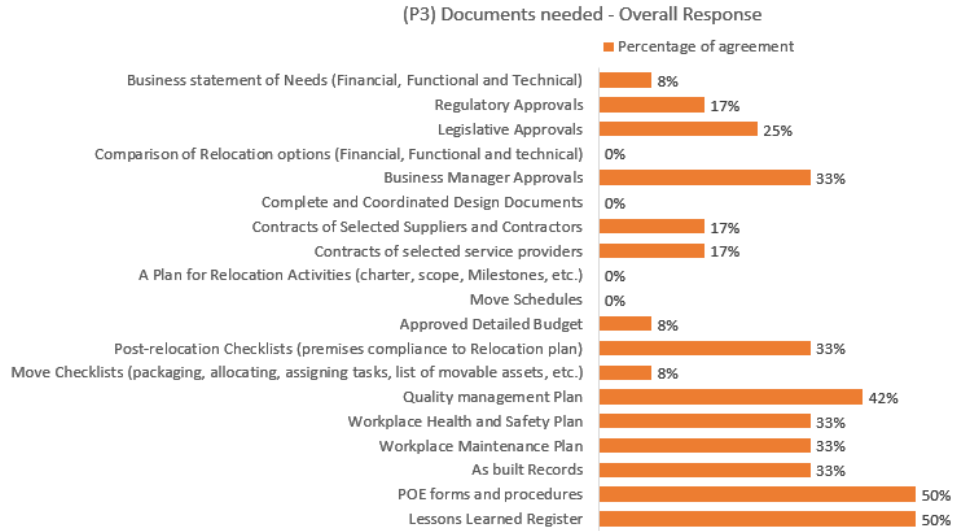


Figure 57 - Respondents (FMers and REMers) opinion upon the documents needed to supplement the functions of (P3)

6.1.6.5 Validation of activities in the organizational workplace relocation phases

The respondents were asked to assess and validate the importance of the framework activities over the workplace relocation phases and the importance index was calculated using equation (1.3) in chapter one. The rates of importance were determined according to the ranges specified in chapter one. Table xx shows the activities of the framework, their importance index, the rate of importance and the validation question about if the organization that the respondent represent performs it during relocation of workplaces or not:

Process /Activity ID	Phase and activity description	Facilities managers responses for the validation of the framework				Real estate managers responses for the validation of the framework				Overall responses for the validation of the framework		
		(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)		(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)		(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)
P1	Initiate the pre-relocation activities	89.6%	Extremely Important	97.2% (Yes)		79.9%	Very Important	83.3% (Yes)		84.7%	Very Important	90.3% (Yes)
P1.1	Analyze business needs for relocation	83.3%	Very Important	100%	-	91.7%	Extremely Important	66.7%	33.3%	87.5%	Extremely Important	83.3%
P1.2	Assess the condition of existing facilities	79.2%	Very Important	100%	-	79.2%	Very Important	66.7%	33.3%	79.2%	Very Important	83.3%
P1.3	Assess relocation options	87.5%	Extremely Important	83.3%	16.7%	70.8%	Very Important	66.7%	33.3%	79.2%	Very Important	75.0%
P1.4	Plan for relocation	91.7%	Extremely Important	100%	-	79.2%	Very Important	100.0%	-	85.4%	Very Important	100.0%
P1.5	Allocate budget for relocation activities	100.0%	Extremely Important	100%	-	70.8%	Very Important	100.0%	-	85.4%	Very Important	100.0%
P1.6	Design the new premises	95.8%	Extremely Important	100%	-	87.5%	Extremely Important	100.0%	-	91.7%	Extremely Important	100.0%

Figure 58 - validation of the framework based on overall combined group of respondents and respondents (FMers and REMers) validation separately

Process /Activity ID	Phase and activity description	Facilities managers responses for the validation of the framework				Real estate managers responses for the validation of the framework				Overall responses for the validation of the framework		
		(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)		(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)		(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)
P2	Implement the relocation activities	71.5%	Very Important	100% (Yes)		84.7%	Very Important	97.2% (Yes)		78.1%	Very Important	98.6% (Yes)
P2.1	Prepare work packages	79.2%	Very Important	100%	-	75.0%	Very Important	100.0%	-	77.1%	Very Important	100.0%
P2.2	Select contractors, suppliers & service providers	83.3%	Very Important	100%	-	95.8%	Extremely Important	100.0%	-	89.6%	Extremely Important	100.0%
P2.3	Acquire (lease/own/construct) & fit-out the new premises	75.0%	Very Important	100%	-	87.5%	Extremely Important	100.0%	-	81.3%	Very Important	100.0%
P2.4	Announce relocation activities	62.5%	Very Important	100%	-	79.2%	Very Important	100.0%	-	70.8%	Very Important	100.0%
P2.5	Implement the move	66.7%	Very Important	100%	--	87.5%	Extremely Important	100.0%	-	77.1%	Very Important	100.0%
P2.6	Evaluate compliance to relocation plan	62.5%	Very Important	100%		83.3%	Very Important	83.3%	16.7%	72.9%	Very Important	91.7%

Figure 59 - validation of the framework based on overall combined group of respondents and respondents (FMers and REMers) validation separately

Process /Activity ID	Phase and activity description	Facilities managers responses for the validation of the framework				Real estate managers responses for the validation of the framework				Overall responses for the validation of the framework		
		(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)		(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)		(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)
P3	Conduct the post-relocation activities	72.9%	Very Important	91.7% (Yes)		84.4%	Very Important	83.3% (Yes)		80.2%	Very Important	87.5%
P3.1	Establish a workplace health and safety plan	79.2%	Very Important	100%	-	83.3%	Very Important	83.3%	16.7%	87.5%	Extremely Important	91.7%
P3.2	Develop and initiate workplace maintenance plan	75.0%	Very Important	100%	-	95.8%	Extremely Important	100.0%	-	85.4%	Very Important	100.0%
P3.3	Develop and maintain record keeping procedures	62.5%	Very Important	83.3%	16.7%	91.7%	Extremely Important	83.3%	16.7%	77.1%	Very Important	83.3%
P3.4	Conduct post occupancy evaluations	75.0%	Very Important	83.3%	16.7%	66.7%	Very Important	66.7%	33.3%	70.8%	Very Important	75.0%

Figure 60 - validation of the framework based on overall combined group of respondents and respondents (FMers and REMers) validation separately

Overall responses for the validation of the framework				
Process /Activity ID	Phase and activity description	(Imp. Index)	Rate of Importance	Do you perform this in your organization? (Yes) or (No)
P1	Initiate the pre-relocation activities	84.7%	Very Important	90.3% (Yes)
P1.1	Analyze business needs for relocation	87.5%	Extremely Important	83.3%
P1.2	Assess the condition of existing facilities	79.2%	Very Important	83.3%
P1.3	Assess relocation options	79.2%	Very Important	75.0%
P1.4	Plan for relocation	85.4%	Very Important	100.0%
P1.5	Allocate budget for relocation activities	85.4%	Very Important	100.0%
P1.6	Design the new premises	91.7%	Extremely Important	100.0%
P2	Implement the relocation activities	78.1%	Very Important	98.6% (Yes)
P2.1	Prepare work packages	77.1%	Very Important	100.0%
P2.2	Select contractors, suppliers & service providers	89.6%	Extremely Important	100.0%
P2.3	Acquire (lease/own/construct) & fit-out the new premises	81.3%	Very Important	100.0%
P2.4	Announce relocation activities	70.8%	Very Important	100.0%
P2.5	Implement the move	77.1%	Very Important	100.0%
P2.6	Evaluate compliance to relocation plan	72.9%	Very Important	91.7%
P3	Conduct the post-relocation activities	80.2%	Very Important	87.5%
P3.1	Establish a workplace health and safety plan	87.5%	Extremely Important	91.7%
P3.2	Develop and initiate workplace maintenance plan	85.4%	Very Important	100.0%
P3.3	Develop and maintain record keeping procedures	77.1%	Very Important	83.3%
P3.4	Conduct post occupancy evaluations	70.8%	Very Important	75.0%

Figure 61 - Overall respondents validation of the framework

6.1.6.4.4. For the process (P1) Initiate the Pre-relocation Activities

The process 6 functions have been evaluated by both respondents to be averagely performed in their organizations by 90.3% (almost 10 out of 12 combined respondents); this means that facilities managers and real estate managers have experienced the process (P1) through their relocation experiences. 100% of the respondents (12 out of 12) have identified “plan for relocation”, “Allocate a budget for relocation” and “ Design the new premises” being performed in their organizations. Where 83.3% (10 out of 12) agreed that “Analyze business needs for relocation” and “Assess the condition of existing facilities” functions are being performed in times of relocations managed by their organizations. Where, 75% (9 out of 12) indicated that the function “Assess relocation options” is performed, by their organizations in times of relocation. Table 14 illustrates each function importance in detail.

6.1.6.4.5. For the process (P2) Implement the Relocation Activities

The process 6 functions have been evaluated by both respondents to be averagely performed in their organizations by 98.6% (almost 11 out of 12 combined respondents); this means that the combined responses of the facilities managers and the real estate managers have collectively experienced the process (P2) through their relocation experiences. 100% of respondents (12 out of 12) agreed that “prepare work packages”, “Select contractors, suppliers and service providers”, “Acquire and fit-out the new premises”, “Announce relocation activities” and “Implement the move” are being performed by their organizations in times of relocation. Where, 91.7% (almost 11 out of 12) indicated that the function

“Evaluate compliance to relocation plan” is performed, by their organizations in times of relocation. Table 14 illustrates the functions importance indices in detail.

6.1.6.4.6. For the process (P3) Conduct the Post-Relocation activities

The process 4 functions have been evaluated by both respondents to be averagely performed in their organizations by 98.6% (almost 11 out of 12 combined respondents); this means that the combined responses of the facilities managers and the real estate managers have collectively experienced the process (P3) through their relocation experiences. 100% (12 out of 12) of respondents indicated that the function “Develop and initiate workplace maintenance plan” was considerably performed by their organizations in times of workplace relocation. Where, 91.7% (almost 10 out of 12) indicated that the function “Establish workplace health and safety plan” is performed in workplace relocations managed by their organizations. Where, 83.3% (almost 9 out of 12) indicated upon the function “Develop and maintain record keeping procedures” and 75% (9 out of 12) upon “Conduct post occupancy evaluation” are being performed by their organizations in times of workplace relocation. The relative importance indices are illustrated in table 14 in detail for each of the functions by processes.

6.2 DISCUSSION

The average evaluation of all the framework processes is found to be ‘Very Important’ by each of the respondents groups of FM and REM; the calculated average Importance Indices are 79% and 83% respectively. The Framework processes and activities were indicated to be practiced in both respondents organizations; the FM respondents by 97% and REM by 89% in times of relocation. This ensures that their workflows in times of relocation are modeled by the framework and aimed to be enhanced and guided through the future use of the framework, combining qualitative and quantitative research methods. The FM respondents indicated that the (P1) initiate the pre-relocation activities to be ‘Extremely Important’ in compare to REM which indicated that (P2) as an ‘Extremely Important’. Both respondents agreed that a facilities manager must be involved over the three processes of relocation (P1), (P2) and (P3).

Workplace relocation intends to respond to the challenges facing organizations. Findings of this study reinforces that relocation provides a viable solution to enable organizations to access newer markets, merge with other entities and accommodate users’ changing needs in space capacities. In pursuit for investigating the current practice of workplace relocation in Saudi Arabia, a questionnaire survey was used to interview was investigated by interviewing 64 corporate real estate professionals. Analysis of the received feedback indicated that the main drivers for workplace relocation include fostering a better management and utilization of the space; minimizing the expenditures pertaining to lease, O&M; improving the organization’s image to attract more business; and adapting to emerging modes of workplace layout. Further, the main challenges affecting the workplace relocation process include constrained budgets and time for planning the relocation;

insufficient identification of business needs; and business interruptions and urgency to relocate. The professionals added that the most significant types of considerations for workplace design during the relocation process are the technical and functional considerations. Finally, The professionals pointed out to in-house, as well as outsourcing as possible management scenarios for workplace relocation. Finally, this study enriches theory by presenting empirical findings from corporate real estate professionals point of view upon the drivers, challenges and considerations which might implicate workplace relocation; decision making and implementation.

The practice of relocation has been always a questionable process from a physical location, human behavior and space use perspectives. The topic of workplace relocation has been discussed dispersedly in the literature, yet it lacked the availability of a descriptive, systematic, and generic frameworks that model and cover all the aspects involved during the relocation process. This chapter has presented the validation of the framework model proposed in the previous chapter for organizational workplace relocation. Development of the framework was guided by the observed professional practice and the knowledge areas available in the literature. The developed framework model has been described and graphically represented using the IDEF0 process model diagram, starting from the previous premise, and ending at the new premise, in a manner that considers all constraints that affect the relocation process. The lifecycle of the relocation process has been framed into three main processes, namely: (1) initiate the pre-relocation, with 6 functions; (2) implement the relocation, with 6 functions; and (3) conduct the post-relocation activities, with 4 functions. The functions within each process have

been described, covering its inputs, outputs, constraints and mechanisms. The framework is flexibly built to accommodate future enhancements and additions.

Twelve professionals were interviewed to assess the importance and validity of the main processes and their underlying functions. There has been a consensus among the professional that most of them carry out the 16 functions of the develop framework in their practice. Furtherly, the professionals indicated that the developed framework holds the potential to improve their practice and serve as guidance in their business conduct. The framework is systematically sequenced to decrease chaotic implementation of relocation by organizing the thoughts of the corporate real estate professionals. Hence, it can be adopted as a standardized process for relocation of workplace facilities. It could be a time saver for organizations endeavoring on the relocation process.

This study is limited to the obtained professionals opinion and reviewed literature. Further research on the topic, would be on transforming the framework into a digital platform where relocation can be used as a service for professionals willing to accelerate the relocation process. The technological advancement today and internet of things, as well as the motivation of the organizations toward digital transformation would be enablers for such platform as a solution.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

In this research, several types of references from different sources were read, analyzed, and compiled to formulate an understanding of the process of organizational workplace relocation, from several geographical areas within the facilities management, property management and corporate real estate management domains. This research was designed to produce qualitatively and quantitatively a generic understanding of the process of workplace relocation. Qualitatively, the review of literature lead to the identification of a thirty-four factors which affect, influence and impact organizational relocation decision, implementation and occupation of a new workplace. Quantitatively, the identified factors were assessed by high profile, and experienced facilities managers and real estate managers; who are proven to be managing dynamic portfolio of organizational facilities and assets for top notch leading national and international organizations in Saudi Arabia. Thus, the knowledge gained from the review of literature and the identified factors assessment by the professionals were used to develop a generic framework for the process of organizational workplace relocation.

Then, the framework was created using IDEF₀ modelling diagram analogically to express the processes and the underlying activities of organizational workplace relocation. Then, the framework was explained and introduced to high profile facilities managers and real estate managers for validation; its applicability to the practice of organizational

workplace relocation. The professionals' feedback upon the framework was positive and commented upon to be fulfilling the need to overcome the complexity of organizational relocations by showing systematically all the possible considerations and concerns. This chapter presents and discusses summary of the research findings, conclusions and recommendations for future research studies.

7.1 Research summary

The main objectives of this research are to identify and assess factors affecting organizational workplace relocation, to develop a framework for the process of organizational workplace relocation and validate the framework by conducting interviews with ten high profile professionals (5 Facilities managers and 5 Real estate managers) in Saudi Arabia. The research methodology consisted of five different phases:

7.1.1 Phase 1:

This phase is mainly focused on investigation and identification; of factors affecting the relocation process, eighty-eight factors were identified, refined and consolidated into thirty-four factors by discussion with three professionals (relocation project managers). The factors were categorized, under three phases of the relocation lifecycle, namely: pre-relocation, relocation and post relocation phases. A questionnaire was developed to assess the thirty-four factors.

A pilot study was conducted for the developed survey to ensure and pretest its properness and sufficiency for collecting professionals response. The survey was found to be suitable for time and sequence needed to collect the responses of professionals. The survey was built upon three sections, which collect demographics about respondents

experience, and their opinion upon relocation; in a structured format of questions (ended up by an open-ended question), to provide opportunity for addition of further considerations by respondents. The survey included the listing of factors against a five-points Likert scale of importance (leveled from 'Extremely Important to 'Not Important') to collect professionals' opinion and to assess each factor's level of importance.

7.1.2 Phase 2:

This phase assessed the thirty-four factors influencing the process of organizational workplace relocation. The factors were identified from the first phase by review of literature, refined by discussion with professionals in relocation and assessed in this phase, by the utilization of a questionnaire survey distributed to 64 professionals (32 facilities managers and 32 real estate managers); the factors assessed are categorized under the three phases of relocation namely: pre-relocation, relocation and post-relocation phases. The sample size was identified based on a provided list by chamber of commerce of organizations which work in real estate management of office buildings and with organizations which possess a (unique and high-level) portfolio of purposely built office facilities. The collected responses data were analyzed quantitatively using relative importance index and level of agreement upon several aspects covering the practice of organizational workplace relocation. Each group of respondents groups feedback and response, on the factors importance questionnaire, were analyzed. In addition to analysis of the combined groups responses to rank the factors and to present the correlation between the opinion of facilities managers and real estate managers. Thus, the test of agreement between both grouped was conducted.

7.1.3 Phase 3:

This phase focused on the development of a generic framework, by identifying the underlying activities of organizational workplace relocation, within three parent processes namely: P1) initiation the pre-relocation activities, P2) implementation of the relocation activities and P3) conduct of post-relocation activities. Each process was described and identified by listing its inputs, outputs and constraints using the IDEF₀ modelling diagrams; this was in light of the required doers as stakeholders for each of the framework functions.

7.1.4 Phase 4:

This phase focused on the validation of the developed generic framework by distribution of a validation survey to a select of high profile (5 facilities managers and real estate managers in Saudi Arabia. The structured assessment revealed how the professionals viewed the activities in the developed framework, in accordance to their perspective and experience stemming from the practice of organizational workplace relocation.

7.1.5 Phase 5:

This phase focused on conclusions, findings and recommendation of the research. Also, discussed the future area of research were emphasized.

7.2 CONCLUSIONS

The findings of this study are expressed in accordance to the research objectives identified in chapter 1 and listed in section 1.3 as follows:

7.2.1 Objective 1:

To identify and assess the factors that affect the phases of organizational workplace relocation, namely: the pre-relocation, relocation and post-relocation phases (as of facilities managers and real estate managers). The identified factors were presented in chapter 3 and discussed in sections (3.1, 3.2 and 3.3). The assessment of the factors was presented in chapter 4 section 4.1, 4.2, 4.3, 4.4, 4.5 and 4.6. the questionnaire used is presented in appendix 1. The conclusions are:

- 1- Thirty-four factors that affect the phases of organizational workplace relocation were identified, through literature review, professionals expertise and the pilot study. All the factors were grouped into three phases: the pre-relocation, relocation and post-relocation phases.
- 2- The results revealed that respondents (69% of facilities managers and 63% of real estate managers) worked on low-rise office buildings, (34% of facilities managers and 38% of real estate managers respondents) on med-rise office buildings and (16% of facilities managers and 31% of real estate managers respondents) high-rise office buildings relocation projects.
- 3- The respondents evaluated all the identified factors. All the factors were assessed as “Very important”. Where the “O&M requirements of the new premises”, “allocated budget for relocation”, “minimization of relocation interruption”, “time control & management of the relocation process”, “cost control & management of the relocation process”, “availability of maintenance plans”, “availability of workplace health and safety plan” and “availability of orientation plans for the new premises” were evaluated as “Extremely important” by the facilities managers group. Where, “analysis

of business needs for relocation", "allocated budget for relocation ", "selection of fit-out contractor" and "cost control & management of the relocation process" were evaluated as "Extremely important" by the facilities managers respondents group. The "sustainability measures of the new premises" was the only factor evaluated to be "Important" by the real estate managers group. Collectively, the "availability of workplace health and safety plan" was ranked first among other factors in importance by the analysis of the combined responses from both respondents groups (the facilities managers and real estate managers).

- 4- After the completion of the questionnaire, the respondents highlighted the completeness of factors coverage upon the most aspects considered in practice in times of organizational workplace relocation, and they have ascertained that the relocation as a complex and hectic process. where the listing of the identified factors would ensure that almost every aspect is covered. Additionally, the respondents asked to have the list of factors to integrate them in their business processes for managing their projects of organizational workplace relocation.
- 5- The results of the distributed surveys were tested, for the levels of agreement between the two groups responses, namely: facilities managers and real estate managers. The level of agreement between both groups was discovered to be ($p = 0.577$), which is indicating a moderate level of agreement between both respondents groups. The test of agreement shows that both respondents share similar perspective towards the organizational workplace relocation.
- 6- The discussion with both respondents group indicated that; there is a need to accelerate the process of relocation, as organizations consume costs and time to occupy and

acquire the new premises. Therefore, the provision of a specialized relocation service consultant and executor for relocation would ensure smoother transition and minimize interruptions caused by relocation activities to core business activities. The respondents identified the need for documenting every activity and obtaining the required legal and regulatory approvals; to ensure that relocation objectives are met. Further, the integrated involvement of several stakeholders from the relocating organization would ensure better delivery, ease occupation and operation of the new workplace premises.

- 7- The process of selecting movers, suppliers and fit-out contractors is found to be highly dependent on each doer having a relative experience and a quality portfolio of previous projects, all with an eye on effective costs, and time needed, to fulfill the desired quality of the new premises. In addition, the fit-out contractor competency to coordinate between several contractors suppliers and movers is found to be an essential quality that lead to the successful implementation of the new premises.

7.2.2 Objective 2:

To develop a framework for the process of organizational workplace relocation over three processes of initiating the pre-relocation activities, conducting the relocation activities and the post-relocation activities. The framework was developed and presented in figure (Framework IDEF0 – 1) and discussed in chapter 5 (sections 5.3 and 5.4). The details of each process and their underlying functions of the framework were presented and described, in chapter 5 (section 5.4). The conclusions of achieved results were:

- 1- The framework was developed based on all the information collected using IDEF₀ modelling diagram. The initial list of activities for the framework consisted of eighteen activity that included inputs, outputs and constraints. Moreover, the stakeholders needed for each activity were identified.
- 2- The eighteen activities were divided into three parent processes. The processes are initiate the pre-relocation activities, implement the relocation activities and conduct the post-relocation activities. They were selectively identified to meet the generic nature and applicability to be adapted and applied to manage almost any organizational relocation of workplace.

7.2.3 Objective 3:

To validate the developed framework through interviews with ten high profile professionals (5 facilities managers and 5 real estate managers) but the achieved exceeded the targeted; they were twelve high profile professionals (6 facility managers and 6 real estate managers) in Saudi Arabia. The framework was validated through development, testing and administering of questionnaire survey and interview.

The process of validation was presented in chapter 6 and discussed in (section 6.2). The validation questionnaire is presented in appendix (2), and the following conclusions were drawn:

- 1- Validation of the framework was initiated to determine its practical applicability. The developed framework was assessed by twelve professionals (6 facilities managers and 6 real estate managers).

2- The descriptions of the proposed framework parent processes are:

- *Initiate the pre-relocation activities (P1):* starts by identifying business needs for relocation, allocating budget, planning and design of the new premises.
- *Implement the relocation activities (P2):* transforming design into work packages, selecting contractors and service providers, moving into new premises and announcement of the move.
- *Conduct the post-relocation activities (P3):* development of all necessary procedures and plans to operate, occupy and evaluate the new premises.

3- The assessment of the framework by the high profile professionals, whom are experienced with organizational relocation, (6 facilities managers and 6 real estate managers) upon its underlying functions were indicated to be “Very Important”; except only for “analyze business needs for relocation”, “design the new premises”, select contractors, suppliers and service providers”, “acquire and fitout of the new premises”, “implement the move”, “develop and initiate workplace maintenance plan” and “develop and maintain record keeping procedures” were indicated as “Extremely Important” by real estate managers respondents’ group.

Where, activities “asses relocation options, “plan for relocation” , “allocate budget for relocation activities” and design the new premises” were indicated as “Extremely important” by the facilities managers respondents’ group.

Collectively, for the combined groups of respondents, the importance indices were analyzed and all activities were found to be “Very important”; except for the activities “analyze business needs for relocation”, “design the new premises”, “select contractors, suppliers and service providers” and “establish workplace health and safety plan” were

indicated as “Extremely important”, through the three main processes of organizational relocation of workplace.

4- The most important parent process is “initiate the pre-relocation activities” by the facilities managers validators. Where, “implement the relocation activities” is indicated to be the most important parent process of the framework, according to the real estate managers group of validators. Collectively, for the combined validators opinions the parent process of “Initiate the pre-relocation activities” is indicated to be the most important among all other processes namely: “Implement the relocation activities” and “Conduct the post-Relocation activities”.

5- The framework is validated and found to be applicable to practices of facilities managers and real estate managers in times of organizational relocation in Saudi Arabia.

7.3 Recommendations

The following recommendations were established from the thesis:

- 1- The identified factors are found to be relatively important for both research and professional practice.
- 2- Organizations should consider the importance of utilizing the framework as guidance for managing the relocation of workplace in Saudi Arabia.
- 3- The framework model provides information and explains inputs, outputs and constraints for activities involved in the process of relocation of organizational workplace.
- 4- The proposed generic framework can be used flexibly by small- and large-scale organizations in times of relocation of workplaces.

5- There is an identified need among facilities managers and real estate managers to outsource the relocation activities to a specialized consultant or service provider, that accelerates the process of relocation and attracts organizations to the oversupply of offices in Saudi Arabia.

6- There is a need to implement a consistent and documented clear regulatory and legal requirements for the occupation and acquirement of workplace facilities in Saudi Arabia. Almost, all professionals indicated that there is instability and continuous additions to the set of requirements by civil defense for the safety of office buildings and the municipal requirements for the approval upon attainment of new facilities. Its suggested to establish guidelines for green leasing contracts as all respondents undermined the green requirements and sustainability requirements remarking them as costly and non profitable schema of occupation.

7- The increasing rate of women's empowerment in the Saudi workplace drive changes in workplace facilities and layout; many organizations added amenities, services and gender oriented spaces such as toilets, prayer rooms etc., the consideration of this aspect should be taken into consideration by the real estate managers to improve attraction of purposely built office facilities.

7.4 Directions for further research

Organizational relocations of workplace are hectic and complex; they usually takes three to six months or even longer to fit-out and relocate from one place to another, where in other scenarios it may take two years or more to construct and acquire new organizational facilities for the workplace. Thus, there is a noticeable emerging trend and

need for offices as a service for organizations, which relocate shortly and quickly. The research on these topics would introduce fundamental understandings of a futuristic workplace:

- Future studies can focus on the mobility of knowledge workers and organizational workplace.
- Further research could be conducted on Innovation of space utilization in organizational workplace facilities.
- Future studies may focus on the design of specialized collaborative workplaces servings several organizational needs.
- Future studies may focus on the workplace technological strategies for measuring performance and staff satisfaction. Furtherly, workplace health and safety requirements.
- Future studies may focus on employees wellbeing at the workplace.
- Also, future studies may focus on the transformation of office buildings toward green and sustainability measures in Saudi Arabia; there is a need to raise the awareness as many professionals (facilities managers and real estate managers) observe green and sustainability as an unimportant expensive investment.

References

- Abbot, G. R., McDuling, J. J., Parsons, S., & C, S. J. (2007). "Building condition assessment: A performance evaluation tool towards sustainable asset management". *CIB World Building Congress*, pp.649–662.
- Abdelfattah, A. F. . (2018). "Relation between Green Buildings and Sustainable Development Practices". *SSRN Electronic Journal*, pp.1–11.
<https://doi.org/10.2139/ssrn.3163476>
- Abdullah, S., Mohd Ali, H., Sipan, I., Deakin, M., & Abdullah, M. N. (2015). "Space utilisation: interpreting the result". *Jurnal Teknologi*, 77(30), pp.55–62.
<https://doi.org/10.11113/jt.v77.6868>
- Aburumman, M., Newnam, S., & Fildes, B. (2019). "Evaluating the effectiveness of workplace interventions in improving safety culture: A systematic review". *Safety Science*, 115(January), pp.376–392. <https://doi.org/10.1016/j.ssci.2019.02.027>
- Adnan, Y. M., Daud, M. N., & Razali, M. N. (2015). "A multi-criteria framework for office tenants' preferences at office buildings". *International Journal of Strategic Property Management*, 19(3), pp.271–282.
<https://doi.org/10.3846/1648715X.2015.1052586>
- Adnan, Y. M., Daud, M. N., Ahmad, I. M., & Aziz, A. A. (2009). "Determining the criteria for the classification of purpose built office buildings in Malaysia". *Pacific Rim Property Research Journal*, 15(2), pp.225–243.
<https://doi.org/10.1080/14445921.2009.11104279>
- Aguilar, J., Barnes, T., Browne, J., Hamilton, B. A., Burney, Y., Byrd, J., Matheson, G. (2013). "Forensic Science Laboratories: Handbook for Facility Planning, Design, Construction, and Relocation". <https://doi.org/10.6028/NIST.IR.7941>
- Al Masry Al Youm. (2019, January 20). *www.egyptindependent.com, Egypt independent*:
<https://ww.egyptindependent.com/egypt-to-relocate-51000-government-employees-to-new-administrative-capital/>
- Allard, L. E., & Barber, C. (2003). "Challenges and opportunities in aligning real estate and the workplace with business strategy: A survey of leading CEOs". *Journal of Corporate Real Estate*, 5(3), pp. 213–220.
<https://doi.org/10.1108/14630010310812109>

- Altman, Y. (1991). "Relocation of companies: the human resources perspective". *Journal of Managerial Psychology*, 6(1), pp.12-16.
- American Society for Testing and Materials. (1998). "Standard terminology of building constructions. ASTM Standards", *ASTM E 631(93a)*, pp.1-35.
<https://doi.org/10.1520/E0631-15>
- Arge, K. (2005). "Adaptable office buildings: Theory and practice". *Facilities*, 23(3/4), pp.119-127. <https://doi.org/10.1108/02632770510578494>
- Ashraf M. Salama, L. C. (2013). "The impact of the spatial qualities of the workplace on architects' job satisfaction". 8(2), pp.52-64. <https://archnet.org/publications/6922>
- Asif, M. (2016). "Growth and sustainability trends in the buildings sector in the GCC region with particular reference to the KSA and UAE". *Renewable and Sustainable Energy Reviews*, 55, pp.1267-1273. <https://doi.org/10.1016/j.rser.2015.05.042>
- ASTM international. (2003). "Standard Practice for Quality Control of Geosynthetic Clay Liners". *ASTM Standards*, 97 (Reapproved), pp.1-2. <https://doi.org/10.1520/D5889>
- ASTM International. (2012). "Standard Practice for Rating the Serviceability of a Building or Building-Related Facility". *ASTM Standards*, E1334 - 95(2012), pp.1-12. <https://doi.org/10.1520/E1334-95R12.2>
- ASTM International. (2013a). "Standard Practice for Setting the Requirements for the Serviceability of a Building or Building-Related Facility , and for Determining What Serviceability is Provided or Proposed". *ASTM Standards*, E1679 - 13(2013), pp.1-19. <https://doi.org/10.1520/E1679-13.2>
- ASTM International. (2013b). "Standard Terminology of Facility Management (Building-Related)". *ASTM Standards*, E1480-92(2013), pp.1-6.
<https://doi.org/10.1520/E1480-92R04.2>
- ASTM International. (2014). "Standard Terminology of Building Economics". *ASTM Standards*, E833-14(14), 1-7. <https://doi.org/10.1520/E0833-09A.2>
- ASTM International. (2015a). "Standard Classification for Facility Asset Component Tracking System (FACTS)". *ASTM Standards*, E3035 - 15(2015), pp.1-7.
<https://doi.org/10.1520/E3035-15>
- ASTM International. (2015b). Standard Guide for Management of Customer-Owned Property Assets in Possession of Supplier , Contractor or Subcontractor. *ASTM Standards*, E3015-15(15), pp.1-11. <https://doi.org/10.1520/E3015-15>

- ASTM International. (2017). “Standard practice for measuring and calculating building loss features that take up floor area in buildings”. *ASTM Standards*, E2619/E261(2017), pp.1–11. <https://doi.org/10.1520/E2619>
- ASTM International. (2018). “Standard Classification for Serviceability of an Office Facility for Change and Churn by Occupants”. *ASTM Standards*, pp.1–15. <https://doi.org/10.1520/E1692-95AR18>
- Attwood, D. A. (1996). *The Office Relocation Sourcebook: A Guide to Managing Staff throughout the Move*. Wiley. ISBN: 978-0-471-13016-1, pp.1-288.
- Baccarini, D., & Bateup, G. (2008). “Benefits management in office fit-out projects”. *Facilities*, 26(7/8), pp. 310–320. <https://doi.org/10.1108/02632770810877958>
- Baird, G., & Penwell, J. (2012). “Designers’ intentions versus users’ perceptions: A comparison of two refurbished office buildings”. *Intelligent Buildings International*, 4(1), pp.15–33. <https://doi.org/10.1080/17508975.2011.606360>
- Balbontin, C., & Hensher, D. A. (2019). “Firm-specific and location-specific drivers of business location and relocation decisions”. *Transport Reviews*, 39(5), pp.569–588. <https://doi.org/10.1080/01441647.2018.1559254>
- Best, R., Langston, C., & Valence, G. de. (2011). “Workplace strategies and facilities management-building in value”. ISBN-13: 978-1138135147, 1st Edition, *Spon Press - Taylor & Francis*.
- Biles, M., & Ingrey, I. (1994). “Successful relocation using consultant support”. *Facilities*, 12(3), pp.21-23. <https://doi.org/10.1108/02632779410054406>
- Booz and Company, pwc. (2016). Organization and strategy. <https://www.strategyand.pwc.com/m1/en/strategic-foresight/functional-expertise/organizational-change-management.html>
- Bowker, R. (1989). “The human side of relocation”. *Property management*, 7(3), pp. 248-252. <https://doi.org/10.1108/EUM0000000003334>
- Brady, D., Cain, D. A., Cholakakis, P., Christensen, D., Epstein, S., Fougeron, K., ... Wilson, R. “Asset Lifecycle Model for Total Cost of Ownership Management Framework”, Glossary & Definitions. *National Association of State Facilities Administrators (NASFA)*. *International Facility Management Association (IFMA)*. *Holder Construction Company Federal Facilities Council (FFC)*. *Association of Higher Education Facilities Officers/APPA*. https://www.ifma.org/docs/default-source/knowledge-base/asset_lifecycle_model.pdf

- Brouwer, A. E., Mariotti, I., & Van Ommeren, J. N. (2004). "The firm relocation decision: An empirical investigation". *Annals of Regional Science*, 38(2), pp.335–347. <https://doi.org/10.1007/s00168-004-0198-5>
- Bubshait, A. A., & Al-Gobali, K. H. (1996). "Contractor prequalification in Saudi Arabia". *Journal of Management in Engineering*, 12(2), pp.50–54. [https://doi.org/10.1061/\(ASCE\)0742-597X\(1996\)12:2\(50\)](https://doi.org/10.1061/(ASCE)0742-597X(1996)12:2(50))
- Bull, M., & Brown, T. (2012). "Change communication: The impact on satisfaction with alternative workplace strategies". *Facilities*, 30(3/4), pp.135–151. <https://doi.org/10.1108/02632771211202842>
- Burt, A. (1990). "Real estate issues in corporate relocation in Western Europe". *The International Executive*, 32(1), pp.24–28. <https://doi.org/10.1002/tie.5060320107>
- Cairns, G. (2003). "Seeking a facilities management philosophy for the changing workplace". *Facilities*, 21(5/6), pp.95–105. <https://doi.org/10.1108/02632770310476705>
- Candido, C., Thomas, L., Haddad, S., Zhang, F., Mackey, M., & Ye, W. (2019). "Designing activity-based workspaces: satisfaction, productivity and physical activity". *Building Research & Information*, 47(3), pp.275–289. <https://doi.org/10.1080/09613218.2018.1476372>
- Capasso, A. M. (2003). "The art of the successful organisational move". *Journal of Facilities Management*, 2(1), pp.35–53. <https://doi.org/10.1108/14725960410808104>
- Carrincazeaux, C., & Coris, M. (2015). "Why Do Firms Relocate? Lessons from a Regional Analysis". *European Planning Studies*, 23(9), pp.1695–1721. <https://doi.org/10.1080/09654313.2015.1048186>
- Centre for excellence in universal design. (2012). *Building for Everyone: Booklet 2 - entrances and horizontal circulation*. here
- Christersson, M., & Rothe, P. (2012). "Impacts of organizational Relocation: a conceptual framework". *Journal of corporate real estate*, 14(4), pp.226–243.
- Christersson, M., & Culley, J. (2018). "How far and often do organizations relocate offices?". *Nordic Journal of Surveying and Real Estate Research*, 13(1), pp.18–31. <https://doi.org/10.30672/njsr.66009>
- Christersson, M., & Rothe, P. (2012a). "Impacts of organizational relocation: a conceptual framework". *Journal of Corporate Real Estate*, 14(4), pp.226–243. <https://doi.org/http://dx.doi.org/10.1108/JCRE-12-2012-0030>

- Ciaramella, A., & Dettwiler, P. (2011). "A relocation model of European manufacturing firms: cases from Italy and Sweden". *Journal of Corporate Real Estate*, 13(4), pp.233–246. <https://doi.org/10.1108/14630011111214437>
- City of Somerville. (2019). "Departmental Relocation Strategy and Implementation Plan". (*Final Report; I. Kleinfelder Northeast, Ed.*). Retrieved from <https://www.somervillema.gov/sites/default/files/departmental-relocation-strategy-and-implementation-plan-report.pdf>
- Claire Sanderson, D., & Mary Edwards, V. (2016). "Determinants of satisfaction amongst tenants of UK offices". *Journal of Corporate Real Estate*, 18(2), pp.102–131. <https://doi.org/10.1108/JCRE-09-2015-0022>
- Clark, W., & E. Burt, J. (1980). "The Impact of Workplace on Residential Relocation". *Annals of the Association of American Geographers*, 70(1), 59.
- Cole, R. J., Oliver, A., & Blaviesciunaite, A. (2014). "The changing nature of workplace culture". *Facilities*, 32, 786–800. <https://doi.org/10.1108/F-02-2013-0018>
- Comcare. (2016). "Work Health and Safety (WHS) Management Plan – template". <http://creativecommons.org/licenses/by/3.0/au/deed.en%0Ahttp://creativecommons.org/licenses/by/3.0/legalcode%0Ahttp://www.itsanhonour.gov.au/coat-arms/index.cfm>
- Courtney, H., Kirkland, J., & Vi, S. (2000, June). "Strategy under uncertainty". *McKinsey & Company - insights*.
- D. Baccarini, & G. Bateup. (2008). "Benefits management in office fit-out projects". *Facilities*, Vol. 26 No. 7/8.
- D. Stokols and T. Scharf, "Developing Standardized Tools for Assessing Employees' Ratings of Facility Performance," in *Performance of Buildings and Serviceability of Facilities*, ed. G. Davis and F. Ventre (West Conshohocken, PA: ASTM International, 1990), pp.55-79. <https://doi.org/10.1520/STP18913S>
- Davis, A. (2015). "CULTURE: Workplace culture a benefits differentiator: Bright Horizons' CHRO explains what distinguishes a great place to work from a not-so-great place to work". *Trade Journals*, 29(9), pp. 1–3. Retrieved from <https://search.proquest.com.extoljp.kfupm.edu.sa/abicomplete/docview/1692581524/abstract/87FD80D36F9B4092PQ/2?accountid=27795>
- Davis, M. K. (2012). "Real Estate Leases". *Accounting for Real Estate Transactions*, (October), pp.191–274. <https://doi.org/10.1002/9781118386231.ch4>

- Denning, L. (2017, October). “*Saudi Arabia’s NEOM : oasis or a sandcastle*”. Retrieved from www.bloomberg.com: <https://www.bloomberg.com/news/articles/2017-10-24/saudi-arabia-s-neom-oasis-or-sand-castle>
- Drake, A. (2002). “Moving forward: Beyond cost per square foot - the other critical success factors in workplace change projects”. *Journal of Corporate Real Estate*, 4(2), pp.160–168. <https://doi.org/10.1108/14630010210811804>
- Ehenberg, M. (2016). A Different View: FM from a Business Perspective. *Facility Management Journal*, (November/December), 10. http://fmj.ifma.org/publication/?i=359157#%7B%22issue_id%22:359157,%22page%22:18%7D
- "Eight Countries that Moved their Capitals". (2015). *BBC*. <http://www.bbc.com/news/world-31877909>
- Elena Patiño-Rodríguez, C., & Jesus Guevara Carazas, F. (2019). “Maintenance and Asset Life Cycle for Reliability Systems”. *Maintenance and Asset Life Cycle for Reliability Systems*. pp.22. <https://doi.org/10.5772/intechopen.85845>
- Elsayah, O. S. (2016). “A framework for improvement of contractor selection procedures on major construction project in Libya”. *PQDT - UK & Ireland*, (July). Retrieved from <http://ezphost.dur.ac.uk/login?url=https://search.proquest.com/docview/1917327165?accountid=14533%0Ahttp://openurl.ac.uk/ukfed:dur.ac.uk?genre=dissertations+%26+theses&issn=&title=A+framework+for+improvement+of+contractor+selection+procedures+on+major+con>
- El-Zeiny, R. M. A. (2012). “The Interior Design of Workplace and its Impact on Employees’ Performance: A Case Study of the Private Sector Corporations in Egypt”. *Procedia Social and Behavioral Sciences*, 35, pp.746–756. <https://doi.org/10.1016/J.SBSPRO.2012.02.145>
- Facilities department. (2019). “Procedures for space acquisitions, relocations and renovations purpose”, (Vol. 1, p. 1). pp. 1 <https://www.lwtech.edu/about/facilities/facilities-planning-council/docs/lwtech-fpc-2018-19-procedures-request-for-relocation-renovations-rev-01-2019.pdf>
- Feldman, D. C., & Bolino, M. C. (1998). Moving on out: When are employees willing to follow their organization during corporate relocation? *Journal of Organizational Behavior*, 19(3), 275–288. [https://doi.org/10.1002/\(SICI\)1099-1379\(199805\)19:3<275::AID-JOB840>3.0.CO;2-S](https://doi.org/10.1002/(SICI)1099-1379(199805)19:3<275::AID-JOB840>3.0.CO;2-S)

- Ferrett, E. (2016). *International health and safety at work revision guide*. New York: Routledge.
- Finch, E. (2011). Change Management and Relocation: a moving experience. 4–13. <https://doi.org/10.4237/sbqp.11.383>
- Forsythe, P., & Wilkinson, S. (2015). “Measuring office fit-out changes to determine recurring embodied energy in building life cycle assessment”. *Facilities*, 33(3/4), pp.262–274. <https://doi.org/10.1108/F-08-2013-0065>
- Göçer, Ö., Göçer, K., Ergöz Karahan, E., & İlhan Oygür, I. (2018). “Exploring mobility and workplace choice in a flexible office through post-occupancy evaluation”. *Ergonomics*, 61(2), pp.226–242. <https://doi.org/10.1080/00140139.2017.1349937>
- Goddard, J. B., & Pye, R. (1977). “Telecommunications and Office Location”. *Regional Studies*, 11(1), pp.19–30. <https://doi.org/10.1080/09595237700185031>
- Gounden, K. (1999). “Distant-Decentralised Office Parks A case study of the La Lucia Ridge Office Estate”. Retrieved from <http://hdl.handle.net/10413/2428>
- Gregory, R., Lombard, J. R., & Seifert, B. (2005). “Impact of headquarters relocation on the operating performance of the firm”. *Economic Development Quarterly*, 19(3), pp.260–270. <https://doi.org/10.1177/0891242405276360>
- Haapakangas, A., Hongisto, V., Varjo, J., & Lahtinen, M. (2018). “Benefits of quiet workspaces in open-plan offices – Evidence from two office relocations”. *Journal of Environmental Psychology*, 56, pp.63–75. <https://doi.org/10.1016/j.jenvp.2018.03.003>
- Harris, R. (1987). “Business relocation: Management and implementation”. *Facilities*, 5(2), pp.12–13. <https://doi.org/10.1108/eb006394>
- Hassanain, M. A. (2006). “Factors affecting the development of flexible workplace facilities”. *Journal of Corporate Real Estate*, 8(4), pp.213–220. <https://doi.org/10.1108/14630010610714880>
- Hassanain, M. A. (2010a). “Analysis of factors influencing office workplace planning and design in corporate facilities”. *Journal of Building Appraisal*, 6(4), pp.183–197. <https://doi.org/10.1057/jba.2010.22>
- Hassanain, M. A., Al-Hammad, A. M., & Fatayer, F. (2014). “Assessment of defects in HVAC systems caused by lack of maintenance feedback to the design team”. *Architectural Science Review*, 57(3), pp.188–195. <https://doi.org/10.1080/00038628.2014.888515>

- Hayes, J. (2010). "The theory and practice of Change Management. New York".
PALGRAVE MCMILLAN.
- Hebert, P. R. (2012). "In situ perceptions of a move: Facility management interns consider scientist end-users at a national lab". *Journal of Facilities Management*, 10(2), pp.114–132. <https://doi.org/10.1108/14725961211218758>
- Hills, R., & Levy, D. (2014). "Workspace design and fit-out: what knowledge workers value". *Property Management*, 32(5), pp.415–432. <https://doi.org/10.1108/PM-02-2014-0011>
- Hiltz, M. J. (1999). *Project Management Handbook of Checklists*.
- Hsu J. C. (2019) "Fundamentals of systems engineering - A practitioner's approach." In: Stjepandić J., Wognum N., J. C. Verhagen W. (eds) *Systems Engineering in Research and Industrial Practice*. Springer, Cham, Switzerland.
- Ingrey-Counter, I., & Biles, M. (1994). "Successful Relocation Using Consultant Support". *Facilities*, 12(3), pp.21–23. <https://doi.org/10.1108/02632779410054406>
- Islam, R., Nazifa, T. H., & Mohamed, S. F. (2019). "Factors Influencing Facilities Management Cost Performance in Building Projects". *Journal of Performance of Constructed Facilities*, 33(3), pp.1–13. [https://doi.org/10.1061/\(ASCE\)CF.1943-5509.0001284](https://doi.org/10.1061/(ASCE)CF.1943-5509.0001284)
- ISO. (2018). "ISO 41001:2018 (en) - Facility management - management systems - requirements with guidance for use". *ISO Online browsing platform (OBP)*.
Website: <https://www.iso.org/obp/ui/#iso:std:iso:41001:ed-1:v1:en>
- Jancey, J. M., McGann, S., Creagh, R., Blackford, K. D., Howat, P., & Tye, M. (2016). "Workplace building design and office-based workers' activity: A study of a natural experiment". *Australian and New Zealand Journal of Public Health*, 40(1), pp.78–82. <https://doi.org/10.1111/1753-6405.12464>
- Jeffrey Hill, E., Grzywacz, J. G., Allen, S., Blanchard, V. L., Matz-Costa, C., Shulkin, S., & Pitt-Catsoupes, M. (2008). "Defining and conceptualizing workplace flexibility". *Community, Work and Family*, 11(2), pp.149–163.
<https://doi.org/10.1080/13668800802024678>
- Jylhä, T., Vuolle, M., Nenonen, S., & Virtaneva, M. (2015). "Towards Business Potential of Workplace Services in Finland". *Procedia Economics and Finance*, 21(15), pp.518–523. [https://doi.org/10.1016/s2212-5671\(15\)00207-5](https://doi.org/10.1016/s2212-5671(15)00207-5)
- Kaarlela-Tuomaala, A., Helenius, R., Keskinen, E., & Hongisto, V. (2009). "Effects of acoustic environment on work in private office rooms and open-plan offices -

- Longitudinal study during relocation”. *Ergonomics*, 52(11), pp.1423–1444.
<https://doi.org/10.1080/00140130903154579>
- Karim, K., Marosszeky, M., & Davis, S. (2006). “Managing subcontractor supply chain for quality in construction”. *Engineering, Construction and Architectural Management*, 13(1), pp.27–42. <https://doi.org/10.1108/09699980610646485>
- Kawai, K., Suzuki, M., and Shimizu, C. (2019). “Shrinkage in Tokyo’s central business district: Large-scale redevelopment in the spatially shrinking office market”, *Sustainability*, Vol. 11, No. 10, pp. 2742.
- Kegel, P. (2018). “the Impact of the Physical Work Environment on Organizational Outcomes: a Structured Review of the Literature”. *Journal of Facility Management Education and Research*, 1(1), pp.19–29. <https://doi.org/10.22361/jfmer/76637>
- Kelley, J. E., & Walker, M. R. (1959). “Critical-path planning and scheduling”. *Proceedings of the Eastern Joint Computer Conference, IRE-AIEE-ACM 1959*, pp.160–173. <https://doi.org/10.1145/1460299.1460318>
- Kopczewska, K., & Lewandowska, A. (2018). “The price for subway access: spatial econometric modelling of office rental rates in London”. *Urban Geography*, 39(10), pp.1528–1554. <https://doi.org/10.1080/02723638.2018.1481601>
- Kopp, R., Howaldt, J., & Schultze, J. (2016). “Why Industry 4.0 needs Workplace Innovation: a critical look at the German debate on advanced manufacturing”. *European Journal of Workplace Innovation*, 2(1), pp.7–24.
- Krausz, M., Bizman, A., & Fox, S. (2002). “Factors Affecting post relocation adaptation in a case of an entire plant relocation”. *Journal of managerial psychology*, 17(2), pp.80.
- Lahtinen, M., Ruohomäki, V., Haapakangas, A., & Reijula, K. (2015). “Developmental needs of workplace design practices”. *Intelligent Buildings International*, 7(4), pp.198–214. <https://doi.org/10.1080/17508975.2014.1001315>
- Langley, M. A. (2017). “The Standard for Project Management”. *International Journal of Production Research*.(Vol. 53). <https://doi.org/10.1002/pmj.21345>
- Larsen, J. K., Lindhard, S. M., Brunoe, T. D., & Jensen, K. N. (2018). “The relation between pre-planning, commissioning and enhanced project performance”. *Construction Economics and Building*, 18(2), pp.1–14.
<https://doi.org/10.5130/AJCEB.v18i2.5762>
- Lee, H. H. Y., & Scott, D. (2009). “Overview of maintenance strategy, acceptable maintenance standard and resources from a building maintenance operation

- perspective”. *Journal of Building Appraisal*, 4(4), pp.269–278.
<https://doi.org/10.1057/jba.2008.46>
- Lee, J. (2002). “Factors and Costs Associated with Office Relocations from Central to Suburban Tokyo”. *Human Geography*, 54(5).
<https://doi.org/10.4200/jjhg1948.54.452>
- Leleur, S. (2013). “Complex Strategic Choices”. *Journal of Chemical Information and Modeling*. Vol.(53). <https://doi.org/10.1017/CBO9781107415324.004>
- Lievens, F. (2017). “Organizational Image /Reputation”. *The SAGE Encyclopedia of Industrial and Organizational Psychology*, pp.1116–1118.
<https://doi.org/10.4135/9781483386874>
- Lim, T.W. (2019). “The rise of smart cities”, In: *Industrial Revolution 4.0, Tech Giants, and Digitized Societies*, Palgrave Macmillan, Singapore, pp.51-74
- Lin, F. F., Foster, M., Chaboyer, W., & Marshall, A. (2016). “Relocating an intensive care unit: An exploratory qualitative study”. *Australian Critical Care*, 29(2), pp.55–60. <https://doi.org/10.1016/j.aucc.2015.09.001>
- Linggar, S., Aminullah, A., & Triwiyono, A. (2019). “Analysis of building and its components condition assessment case study of dormitory buildings”. *MATEC Web of Conferences*, 258, 03003. <https://doi.org/10.1051/mateconf/201925803003>
- Louch, P. (2014). “Workforce Planning Is Essential to High-Performing Organizations”. *Society for human resource management (SHRM) website*:
<https://www.shrm.org/hrdisciplines/technology/articles/pages/louch-workforce-planning.aspx>
- Lovell, M. (2011). *Checklist: Ensuring a perfect office fit out*. www.morganlovell.com
- Lützkendorf, T., Speer, T., Szigeti, F., & Davis, G. (2005). “A comparison of international classifications for performance requirements and building performance categories used in evaluation methods”. *Proceedings of 11th Joint CIB International Symposium*. Helsinki, Finland., pp.1–19.
- MARIS INTERIORS LLP. (2014). “The ultimate guide to office optimization”. *MARIS INTERIORS LLP*. www.maris-interiors.co.uk
- MARIS. (2014). “The Secrets of a Successful Office Relocation”. *London: maris-interiors.co.uk*.
- Marmaras , N., & Nathanael , D. (2005). *Handbook of Human Factors & Ergonomics*. Greece: National Technical University of Athens.

- Marmaras, N., & Nathanael, D. (2012). “*Workplace Design*”. *Handbook of Human Factors and Ergonomics: Fourth Edition*, pp.597–615.
<https://doi.org/10.1002/9781118131350.ch21>
- Mazzarol, T., & Choo, S. (2003). “A study of the factors influencing the operating location decisions of small firms”. *Property Management*, 21(2), pp.190–208.
<https://doi.org/10.1108/02637470310478918>
- Millhiser, A. (2019). “Three Ways To Prepare Your Business For The Fourth Industrial Revolution”. Retrieved (November 9, 2019), *Forbes* website:
<https://www.forbes.com/sites/amitymillhiser/2019/03/06/three-ways-to-prepare-your-business-for-the-fourth-industrial-revolution/#5ae6a15a76fa>
- Montana.gov. (2019). “Montana right-of-way operations manual”.
<https://www.mdt.mt.gov/>
- Morgan lovell. (2015). *office relocation checklist your step-by-step guide to managing office relocation checklist your step-by-step guide to managing the complexities of business relocation*.
- Morgan, A., & Anthony, S. (2008). “Creating a high performance workplace: A review of issues and opportunities”. *Journal of Corporate Real Estate*, 10(1), pp.27–39.
<https://doi.org/10.1108/14630010810881649>
- Morrison M. Stevens. (2000). “Corporate Relocation Benefits: A Comprehensive Approach”. *Compensation & benefits review*, (April), pp.1–48.
- Nicola Gillen, & Kellett, M. (2017). “Room to roam: costing commercial office fit-out for AECOM ’s”.
- Niezabitowska, Elzbieta, & Winnicka-Jasłowska, D. (2011). “Evolution of the office building in the course of the 20th century: Towards an intelligent building”. *Intelligent Buildings International*, 3(4), pp.238–249.
<https://doi.org/10.1080/17508975.2011.606361>
- Nitsch, H. (2006). “Pricing location: A case study of the Munich office market”. *Journal of Property Research*, 23(2), pp.93–107.
<https://doi.org/10.1080/09599910600800252>
- Nunnington, N., & Haynes, B. (2011). “Examining the building selection decision making process within corporate relocations: To design and evaluate a client focused tool to support objective decision making”. *Journal of Corporate Real Estate*, 13(2), pp.109–121. <https://doi.org/10.1108/14630011111136821>

- Oktra. (2019). *The guide of office fitout*. Vol. 1, pp. 1–32. Retrieved from <https://s3-eu-west-2.amazonaws.com/oktra/content/uploads/2018/05/10141441/The-Guide-to-Office-Fit-Out-20191.pdf>
- Olawale, Y. A., & Sun, M. (2010). “Cost and time control of construction projects: Inhibiting factors and mitigating measures in practice”. *Construction Management and Economics*, 28(5), pp.509–526. <https://doi.org/10.1080/01446191003674519>
- Pellenbarg, P. H., Van Wissen, L. J. G., & Van Dijk, J. (2002). “Firm relocation: state of the art and research prospects”. (Working Paper), (August), pp. 1–42. Retrieved from http://www.rug.nl/staff/p.h.pellenbarg/artikelen/publicaties/35._firm_relocation_state_of_the_art_and_research_prospects.pdf
- Pereira, N. B., Rodrigues, R. C., & Rocha, P. F. (2016). “Post-occupancy evaluation data support for planning and management of building maintenance plans”. *Buildings*, 6(4). <https://doi.org/10.3390/buildings6040045>
- Perera, W. Y., Perera, B. A. K. S., & Jayasena, N. S. (2019). “Adaptability of the shared workspace concept, for office buildings in Sri Lanka”. *Intelligent Buildings International*, pp.1–15. <https://doi.org/10.1080/17508975.2019.1588701>
- Peter W. G. Morris and Jeffrey K. Pinto. (2007). *The Wiley guide to project technology, supply chain & procurement management*. John Wiley & Sons, INC. Vol.(66). <http://www.tuscm.com/wp-content/uploads/2012/10/peter-morris-jeffrey-k.-pinto-the-wiley-guide-to-project-technology-supply-chain-and-procurement-management-the-wiley-guides-to-the-management-of-projects-2007.pdf>
- Preisner, W. F. E. (2005). “Building Performance Assessment—From POE to BPE, A Personal Perspective”. *Architectural Science Review*, 48(3), pp.201–204. <https://doi.org/10.3763/asre.2005.4826>
- Preisner, W. F. E., & Vischer, J. C. (2008). “Assessing Building Performance”. *International Journal of Architectural Research*, (Vol. 2). <https://doi.org/10.26687/archnet-ijar.v2i1.179>
- Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). “Adaptability in the workplace: Development of a taxonomy of adaptive performance”. *Journal of Applied Psychology*, 85(4), pp.612–624. <https://doi.org/10.1037/0021-9010.85.4.612>
- Queensland Department of Public Works. (2003). *Office accommodation management framework*.

- Queensland Government. (2012). *Office Accommodation Workspace and Fitout Standards*.
- R. Rees, D., & Gilleard, J. D. (1998). "Alternative workplace strategies in Hong Kong". *Facilities*, pp.133-137.
- Raewyn, H. (2014). "Workspace design and fit-out: what knowledge workers value". *Property Management*, 32(5), pp.415–432. <https://doi.org/10.1108/PM-02-2014-0011>
- Raz, T., & Globerson, S. (1998). "Effective Sizing and Content Definition of Work Packages". *Project Management Journal*, 29(4), pp.17–23. <https://doi.org/10.1177/875697289802900403>
- Rehm, M., & Ade, R. (2013). "Construction costs comparison between green and conventional office buildings". *Building Research and Information*, 41(2), pp.198–208. <https://doi.org/10.1080/09613218.2013.769145>
- Remøy, H., Rovers, S. and Nase, I. (2019). "Disposal strategies in corporate real estate portfolios: Evidence from the Dutch banking sector", *Journal of Corporate Real Estate*, Vol. 21, No. 2, pp. 113-129.
- RICS-IFMA. (2018). "Strategic FM Framework: RICS Guidance note". *RICS International Standards*, (April), pp.1–44. <http://www.us.jll.com/united-states/en-us/Documents/facility-management/converging-priorities-CRE-outsourcing-JLL-June2015.pdf>
- Rincon, J. L., Lavy, S., & Fernandez-Solis, J. L. (2018). "A Strategic Approach to Target Capital Investment on Facility Assets: Literature Review". *Journal of Facility Management Education and Research*, 1(1), pp.30–39. <https://doi.org/10.22361/jfmer/76316>
- Rolfö, L. V. (2018). "Relocation to an activity-based flexible office – design processes and outcomes". *Applied Ergonomics*, 73(January), pp.141–150. <https://doi.org/10.1016/j.apergo.2018.05.017>
- Rolfö, L., Eklund, J., & Jahncke, H. (2018). "Perceptions of performance and satisfaction after relocation to an activity-based office". *Ergonomics*, 61:5, pp. 644-657.
- Roper, K. O., Kim, J. H., & Lee, S.-H. (2009). "Strategic Facility Planning: A White Paper". *International Facility Management Association*, 22. Retrieved from https://www.ifma.org/docs/default-source/knowledge-base/sfp_whitepaper.pdf

- Rothe, P., & Heywood, C. (2015). "Demystifying the short-distance relocation process: 5 cases from Finland". *Journal of Corporate Real Estate*, 17(3), pp.160–177. <https://doi.org/10.1108/JCRE-11-2014-0029>
- Rothe, P., Heywood, C., Christersson, M., & Sarasoja, A. L. (2015a). "Office relocation management in Finland – challenges and service opportunities". *Property Management*, 33(4), pp. 348–366. <https://doi.org/10.1108/PM-04-2014-0019>
- Rothe, P., Liisa Sarasoja, A., & Heywood, C. (2014). "Short-distance corporate relocation: the employee experience". *Facilities*, Vol. 33(1/2), pp.38-60.
- Rothe, P., Sarasoja, A.-L., & Heywood, C. (2015). "Short-distance corporate relocation: the employee experience". *Facilities*, 33(1/2), pp. 38–60. <https://doi.org/10.1108/F-05-2013-0037>
- Rugless, J. (1993). "Condition Assessment Surveys". *Facilities Engineering Journal*, 21(3), pp.11–13.
- S., STEER, J., KREJA, K., GAWĘDZIŃSKI, I., LIPIŃSKI, M., MARSZAŁEK, K., MIKOŁAJCZYK, Z. (2014). *Poland Fit-Out Cost Guide - traditional and activity-based offices*.
- Saari, A., & Heikkilä, P. (2008). "Building Flexibility Management". *The Open Construction and Building Technology Journal*, 2(1), pp.239–242. <https://doi.org/10.2174/1874836800802010239>
- Safian, E. E. M., Bagdad, M., & Nawawi, A. H. (2011). "The characteristics of purpose built offices in Malaysia: a review of issues". *Sixth International Conference on Construction in the 21st Century*, (April 2015), pp.1–9.
- Sarasoja, L., Rothe, P., Heywood, C., and Christe, M. (2015). "Office relocation management in Finland - Challenges and service opportunities", *Property Management*, 33(4), pp. 348-366.
- Schuster, G. (2014). "24 guidelines for controlled lighting". *California Building Energy Efficiency Standards*.
- Scottish Government. (2017). "4.2 Access within buildings". *Scottish Building Standards*.
Website:<https://www2.gov.scot/resource/buildingstandards/2017Domestic/chunks/ch05s03.html>
- Serin, H., Sahin, Y., & Durgun, M. (2015). "Supplier choice on furniture industry". (December).

- Sharpe, T. (2013). "Innovations for Sustainable Building Design and Refurbishment in Scotland". *B. Dimitrijević, Ed.* . <https://doi.org/10.1007/978-3-319-02478-3>
- Shaw, W. S., & Feuerstein, M. (2004). "Generating workplace accommodations: Lessons learned from the integrated case management study". *Journal of Occupational Rehabilitation*, 14(3), pp.207–216.
<https://doi.org/10.1023/B:JOOR.0000022762.66807.2d>
- Sheikhah, S. M. A. A. (2014). "A Study on Success Factors and Success Criteria in Fit-out Projects in the UAE". *Dissertations for Project Management (PM)*.
<https://bspa.buid.ac.ae/handle/1234/1216>
- Shortland, S. M. (1987). "Managing Relocation". <https://doi.org/10.1007/978-1-349-08181-3>
- Sicola, M. (2017). "Commercial Real Estate Terms and Definitions". *NAIOP Research Foundation*. San Francisco, California. website: <https://www.naiop.org/-/media/Research/Research-Reports/Terms-and-Definitions/CRE-Terms-and-Definitions-2017.ashx>
- Smith, E. F., Gilmer, D. O., & Stockdale, M. S. (2019). "The importance of culture and support for workplace flexibility: An ecological framework for understanding flexibility support structures". *Business Horizons*, 62(5), pp.557–566.
<https://doi.org/10.1016/j.bushor.2019.04.002>
- Søiland, E., & Hansen, G. K. (2019). "Ideas or reality? Flexible space—flexible people?". *Intelligent Buildings International*, 0(0), pp.1–13.
<https://doi.org/10.1080/17508975.2019.1573355>
- Sonmez, M. (2006). "Review and critique of supplier selection process and practices". *Loughborough; Business School, Loughborough*, 1, pp.3–34.
<https://doi.org/dspace.iboro.ac.uk/2134/2160>
- Stan Aronoff, A. K. (1995). *Total Workplace Performance: Rethinking The Office Environment*. Ottawa: WDL Publications.
- Straub, A. (2009). "Dutch standard for condition assessment of buildings". *Structural Survey*, 27(1), pp.23–35. <https://doi.org/10.1108/02630800910941665>
- Swicegood, S. (1987). "Strategic facilities planning". *Property Management*, 5(3), pp.245–247. <https://doi.org/10.1108/eb006663>
- TAQEEM. (2016). *Real estate valuer training program* (vol. 104). Saudi authority of accredited valuers (TAQEEM).

- Thomason, T., & Pozzebon, S. (2002). "Determinants of firm workplace health and safety and claims management practices". *Industrial and Labor Relations Review*, 55(2), pp.286–307. <https://doi.org/10.1177/001979390205500205>
- University of Houston - Facilities Management dept. (2012). "FM Project Files Management Procedures". <https://www.uh.edu/facilities-services/forms/project-delivery/FM-Project-Files-Management-Procedures.pdf>
- US Department of Defense, S. M. C. (2001). *Systems engineering fundamentals*. 22060-5565, (January), pp.222. http://ocw.mit.edu/courses/aeronautics-and-astronautics/16-885j-aircraft-systems-engineering-fall-2005/readings/sefguide_01_01.pdf
- van der Voordt, T. J. M. (2004). "Costs and benefits of flexible workspaces: work in progress in The Netherlands". *Facilities*, 22(9/10), pp.240–246. <https://doi.org/10.1108/02632770410555959>
- Ventovuori, T. (2006). "Elements of sourcing strategies in fm services-a multiple case study". *International Journal of Strategic Property Management*, 10(4), pp.249–267. <https://doi.org/10.1080/1648715X.2006.9637556>
- Vision2030. (2019). "Thriving economy open for business". www.mysaudivision2030.com <https://www.mysaudivision2030.com/thriving-economy-open-for-business/>
- Voordt, T. J. M. va. der, & Jensen, P. A. (2018)." Measurement and benchmarking of workplace performance: Key issues in value adding management". *Journal of Corporate Real Estate*, 20(3), pp.177–195. <https://doi.org/10.1108/JCRE-10-2017-0032>
- Wahida, R. N., Milton, G., Hamadan, N., Lah, N. M. I. B. N., & Mohammed, A. H. (2012). "Building Condition Assessment Imperative and Process". *Procedia Social and Behavioral Sciences*, 65, pp.775–780. <https://doi.org/https://doi.org/10.1016/j.sbspro.2012.11.198>
- Wijerathne, H. A. N., Karunasena, G. I., & Mallawaarachchi, B. H. (2012). "Study on sick building syndrome in office environment". *World Construction Conference 2012 – Global Challenges in Construction Industry*, (June), pp.396–406.
- Willett, B., & Green, R. (1997). "The changing face of relocation management". *Facilities*, 15(5), pp. 150–154. <https://doi.org/10.1108/02632779710162142>
- Williams, B., & Harris, R. (1988). "PREMISES AND THE CORPORATE PLAN: Partial relocation". *Facilities*, 6(7), pp.6–9. <https://doi.org/10.1108/eb006449>

- Wilson, F. (1990). "Performance of Buildings and Serviceability of Facilities. Performance of Buildings and Serviceability of Facilities". *ASTM STP 1*. <https://doi.org/10.1520/stp1029-eb>
- Wineman, J. D., & Barnes, J. (2018). "Workplace Settings". *Environmental Psychology and Human Well-Being*. <https://doi.org/10.1016/b978-0-12-811481-0.00007-x>
- WSCC. (2016). "Occupational Health and Safety Program (Guide for Small Businesses): Where to Start (wscc.nu.ca, Ed.)". [http://www.wscc.nt.ca/sites/default/files/documents/WHERE TO START-OHS PROGRAM -Sept1-2016- English.pdf](http://www.wscc.nt.ca/sites/default/files/documents/WHERE%20TO%20START-OHS%20PROGRAM-Sept1-2016-English.pdf)
- Wu, S. (2010). "Reviews and case studies: Research opportunities in maintenance of office building services systems". *Journal of Quality in Maintenance Engineering*, 16(1), pp.23–33. <https://doi.org/10.1108/13552511011030309>
- Wu, S., Clements-Croome, D., Fairey, V., Albany, B., Sidhu, J., Desmond, D., & Neale, K. (2006). "Reliability in the whole life cycle of building systems". *Engineering, Construction and Architectural Management*, 13(2), pp.136–153. <https://doi.org/10.1108/09699980610659607>
- Zarabi, A., and Lord, S. (2018). "Toward more sustainable behavior: A systematic review of the impacts of involuntary workplace relocation on travel mode choice", *Journal of Planning Literature*, 34(1), pp. 38-58.

Appendix 1 - Factors Assessment Survey:

Factors Affecting Organizational Workplace Relocation: Office Buildings in Saudi Arabia

SUMMARY

Organizational workplace relocation can be a hectic process that requires a lot of organized efforts and planning to be successfully implemented, without disrupting corporate business. The relocation process can be critical due to its complex demands for coordination between several stakeholders, especially in large organizations.

The relocation process takes place over three phases during its life cycle, namely the pre-location phase, relocation phase and post-relocation phase. Each phase has different set of factors that have several impacts on the relocation process. In this regard, this study aims to assess the factors that influence the implementation of organizational workplace relocation. The study is a questionnaire-based, where the questionnaire consists of three parts:

- A. Respondents' general information and local practice.
- B. List of the factors needs to be assessed.
- C. Additional remarks about the relocation process.

Kindly fill in the questionnaire as fully as possible, appreciating your time, consideration and your valuable contribution.

Regards,

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***** Note: this study is for academic research purposes only; your answers will remain confidential and only used for research purposes.***

SECTION (A) : General Information & Local practice

1) Respondent information (Optional)

Name	
Organization	
Organization address	
Phone	
Email	

2) Respondent position

- ☐ Facility manager
- ☐ Real Estate developer / agent
- ☐ Other (Please specify)

3) Years of Experience

- ☐ Less than 5 years
- ☐ 5 to 10 years
- ☐ 10 to 20 years
- ☐ Over 20 years

4) Have you experienced a workplace relocation before?

- ☐ YES
- ☐ NO

5) Size of relocation projects that you mostly dealt with (Multiple selection is allowed):

- ☐ Low-rise office buildings (1-6 Floors)
- ☐ Med-rise office buildings (7-12 stories)
- ☐ High rise office buildings (13 stories and above)
- ☐ Others (Please specify)

6) Please identify all organizational workplace relocation drivers in Saudi Arabia:

- ☐ Better use of workplace space and capacity.
- ☐ Downsizing or growth in number of employees.
- ☐ Seeking a better image for the organization (Aesthetics).
- ☐ Centralizing organizational Units/departments.
- ☐ Decentralizing organizational units/departments.

Cont'd ...

- Access to qualified talent (ability to recruit more qualified and skillful employees at certain location in compare to an old location).
- Access to lower wages of talent (ability to recruit employees at lower wages for cost savings at certain location in compare to an old location).
- Transformation to a new mode of workplace layout (Activity based working space/open plan office/other).
- Gaining access to public transportation.
- Proximity to governmental or joint entities.
- Merger and acquisition of another entity.
- Expenses related (High rent, high operational costs, other).
- Physical constraints of office facility services (Lack of adequate parking's, insecure location, others).
- Need to maintain a level of health and safety requirements.
- Need to meet local legal requirements.
- End of lease for current facility.
- Lack of technological access (High speed internet/ delivery services/ building doesn't meet technological requirements of the organization/ other).
- Management/owner unjustified decision.
- Following real estate market trend/outlook.
- Other (Please specify)

7) Please indicate all the challenges that could affect the relocation process:

- Identification of business needs.
- Business interruptions & sense of urgency.
- Budgetary limitations and control over expenses.
- Time allocated for planning the relocation.
- Lack of skilled movers.
- Unavailability of a complete, coordinated and well documented relocation plan.
- Complexity of buildings systems and technologies.
- Employees' resistance to change, tendency to relax/pause works and attachment to old location (e.g. proximity to housings, schools, etc.).
- Search for possible premises (characteristics).
- Evaluation of possible premises.
- Distance of relocation (between old location and new location).
- Negotiation with landlords.
- Specification of space requirements.
- Design of the new workplace premises.
- Compliance to legal requirements of moving out from old premises (e.g. dilapidation/exit repairs, contractual commitment dates, etc).
- Movement to and fine-tuning the new workplace.
- Other (Please specify)

8) Please identify the best scenario for a relocation process:

- Approaching an organizational facility manager to manage the relocation from old premises to new premises.

[Cont'd ...]

- Outsourcing the relocation process to be managed by a corporate real estate agency from the old premises to the new premises with the support of HR department.
 - Assigning an administrative staff from the organization to manage the relocation process.
 - Other (Please specify)
- 9) Please identify all the measures that can lead to successful selection of a mover:**
- Portfolio of previous relocation projects.
 - Agility, number and capacity of moving vehicles and equipment.
 - Number of skilled and un-skilled mover workforce.
 - Financial status of the mover.
 - Number of other commitments and adequacy to the relocation/move timing.
 - Use of advanced labeling, boxing and shifting resources and technologies.
 - Feedback from previous work references (e.g. letters of appreciation, final delivery and handing over letters or certificate of payments).
 - Fees (total cost, profit, extra fees, etc.).
 - Other (Please specify)

- 10) Please identify all the measures that can lead to successful selection of suppliers:**
- Availability of stock for the required materials (finishes, furniture etc.).
 - Evaluation of the manufacturing facilities and its capacity, origin of materials.
 - Lead times for delivering materials.
 - Ease of installation and packaging, agility of the supplier product.
 - Compliance to workplace design and relocation plan.
 - Availability of certified tests and accreditation for the supplier.
 - Portfolio of previous projects.
 - Fees (total cost, profit, extra fees, etc.).
 - Financial status of the supplier.
 - Number of other commitments and adequacy to the relocation/move timing.
 - Other (Please specify)

- 11) Please identify all the measures that can lead to successful selection of a fit-out contractor:**
- Number of other commitments and adequacy to the relocation/move timing.
 - Portfolio of previous projects.
 - Fees (total cost, profit, extra fees, etc.).
 - Financial status of the contractor.
 - Number of skilled and un-skilled workforce.
 - Competency to coordinate with several contractors/ movers/installers.
 - Other (Please specify)

- 12) Please identify all the functional considerations that are most critical in organization office workplaces:**
- Privacy and public zoning of spaces.
 - Space layout due to departmental adjacencies.
 - Arrangement & availability of meeting rooms, collaborative work areas.

- Availability of communal facilities (e.g. break rooms, restaurant, etc.).
- Type of space layout (open plan offices, closed offices, activity-based layout).
- Availability of storage and archiving space.
- Other (Please specify)

13) Please identify all the technical considerations that are most critical in organization office workplaces:

- Ease of cleaning and maintenance.
- Ergonomics of design of furniture and workplace facility.
- Adequate usage of computers, mobile devices, printing and scanning and technology.
- Adequate use of communication tools (e.g. IP telephony, high speed internet, audio visual systems, etc.)
- Adequate aesthetics for the workplace.
- Compliance with codes and standards.
- Adequate use for wayfinding and signage systems.
- Adequate performance of indoor environmental quality (thermal, visual and acoustical means of comfort)
- Other (Please specify)

[Cont'd ...]

Section (B): Evaluation of Factors affecting the organizational workplace relocation of office buildings

Kindly assess the importance of the factors mentioned in the table below according to the scale shown:

No.	Factors affecting the organizational workplace relocation of office buildings	Importance level				
		Extremely important	Very important	Important	Somewhat important	Not important
A	Factors related to the Pre-relocation Phase					
1.	Analysis of business needs for relocation					
2.	Organizational culture & image requirements.					
3.	Condition of existing assets					
4.	Employee's needs (Economical, Social and Environmental)					
5.	Functional workplace needs					
6.	Technical workplace needs (e.g. health and safety, wayfinding, signage and IT)					
7.	Location of new premises					
8.	Proximity aspects to amenities					
9.	Assessment of skeletal characteristics of the new premises					
10.	Assessment of building services characteristics of the new premises					
11.	Flexibility / adaptability at new premises					
12.	Sustainability measures at the new premises					
13.	O&M requirements for the new premises					

No.	Factors affecting the organizational workplace relocation of office buildings	Extremely important	Very important	Important	Somewhat important	Not important
14.	Development of relocation plan & schedule					
15.	Formation of divisions' move teams					
16.	Allocated budget for relocation					
	Others (Please specify)					
B	Factors related to the Relocation Phase					
17.	Availability of accurate, coordinated and completeness of relocation plan and documents					
18.	Identifying means of access for relocation activities					
19.	Identification and monitoring of safety measures during relocation					
20.	Availability of quality management plan for the relocation process					
21.	Minimization of relocation interruptions					
22.	Selection of movers					
23.	Selection of suppliers					
24.	Selection of fit-out contractor					
25.	Time control & management of the relocation process					
26.	Cost control & management of the relocation process					
	Others (Please specify)					

No.	Factors affecting the organizational workplace relocation of office buildings	Extremely important	Very important	Important	Somewhat important	Not important
C	Factors related to the Post- Relocation Phase					
27.	Availability & adequacy of post relocation checklists					
28.	compliance of suppliers/ movers/ installers / contractors to relocation plan					
29.	Satisfactory outputs of MEP systems' commissioning					
30.	Availability of maintenance plans					
31.	Availability of workplace health and safety plan					
32.	Availability of orientation plans for the new premises					
33.	Occupants satisfaction with new workplace premises					
34.	Availability of record keeping procedures					
	Others (Please specify)					

Section (C): Additional remarks (Optional)

Kindly provide any additional information / clarification that might enhance the research, please don't hesitate to mention them in the available area below:

.....

Thank you for your time, consideration and cooperation

Appendix 2 - Framework Validation Survey:

A Framework for Organizational Workplace Relocation: Office Buildings in Saudi Arabia

SUMMARY

Organizational workplace relocation can be a hectic process that requires a lot of organized efforts and planning to be successfully implemented, without disrupting corporate business. The relocation process can be critical due to its complex demands for coordination between several stakeholders, especially in large organizations.

The relocation process takes place over three phases during its life cycle, namely the pre-location phase, relocation phase and post-relocation phase. Each phase has different activities which impacts the organizational workplace relocation process. In this regard, this study aims to validate the proposed framework of organizational workplace relocation. The study is a questionnaire-based, where the questionnaire consists of three parts:

- A. Respondents' general information and local practice.
- B. List of the processes activities needs to be validated.
- C. Additional remarks about the relocation process.

Kindly fill in the questionnaire as fully as possible, appreciating your time, consideration and your valuable contribution.

Regards,

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*** Note: this study is for academic research purposes only; your answers will remain confidential and only used for research purposes.*

SECTION (A) : General Information

1) Respondent information (Optional)

Name	
Organization	
Organization address	
Phone	
Email	

2) Respondent position

- ☐ Facility manager
- ☐ Real Estate developer / agent
- ☐ Other (Please specify)

3) Years of Experience

- ☐ Less than 5 years
- ☐ 5 to 10 years
- ☐ 10 to 20 years
- ☐ Over 20 years

4) Have you experienced a workplace relocation before:

- ☐ Yes
- ☐ No

5) Size of relocation projects that you mostly dealt with (Multiple selection is allowed):

- ☐ Low-rise office buildings (1-6 Floors)
- ☐ Med-rise office buildings (7-12 stories)
- ☐ High rise office buildings (13 stories and above)
- ☐ Others (Please specify)

Cont'd ...

6) Please select all the positions that should be involved in organizational relocation planning and implementation:

- ☐ Business Managers
- ☐ Departmental Unit heads
- ☐ Facility Manager
- ☐ Planning Engineer
- ☐ Workplace tenants
- ☐ Human resources manager
- ☐ Financial Analyst / Manager
- ☐ Contractors, suppliers and Service providers
- ☐ Design professional (architect / design firm)
- ☐ Real Estate agent
- ☐ Quality Inspector
- ☐ Safety Inspector
- ☐ Security officers
- ☐ Movers
- ☐ Contractors
- ☐ Suppliers
- ☐ Others (please specify)

7) Please select all the documents needed for the effective planning, implementation and occupancy of workplace organizational relocation:

Documents Description	P1	P2	P3
Business statement of Needs (Financial, Functional and Technical)			
Regulatory Approvals.			
Legislative Approvals.			
Comparison of Relocation options (Financial, Functional and technical)			
Business Manager Approvals.			
Complete and Coordinated Design Documents.			
Contracts of Selected Suppliers and Contractors.			
Contracts of selected service providers.			
A Plan for Relocation Activities (charter, scope, Milestones, .			
Move Schedules.			
Approved Detailed Budget.			
Post-relocation Checklists (premises compliance to Relocation plan).			
Move Checklists (packaging, allocating, assigning tasks, list of movable assets, etc.).			
Quality management Plan.			
Workplace Health and Safety Plan.			
Workplace Maintenance Plan.			
As built Records.			
POE forms and procedures.			
Lessons Learned Register.			
Others (Please specify)			

Cont'd ...

SECTION (B) : Activities Validation

Framework Process Steps for: Organizational Workplace Relocation		Level of importance					Do you perform this function at your firm ?	
		Extremely important	Very important	Important	Somewhat important	Not important	YES	NO
P1. Initiate the Pre-relocation Activities								
P1.1	Analyze Business Needs for Relocation							
P1.2	Assess the Condition of Existing Facilities							
P1.3	Assess Relocation Options							
P1.4	Plan for Relocation							
P1.5	Allocate Budget for Relocation							
P1.6	Design the New Premises							
(Others) Please specify								
P2. Implement the Relocation Activities								
P2.1	Prepare Work Packages							
P2.2	Select Contractors, Suppliers & Service Providers							
P2.3	Acquire and Fitout the new premises							
P2.4	Announce Relocation Activities							
P2.5	Implement the Move							
P2.6	Evaluate Compliance to Relocation Plan							
(Others) Please specify								

Cont'd ...

Framework Process Steps for: Organizational Workplace Relocation		Extremely important	Very important	Important	Somewhat important	Not important	Do you perform this function at your firm ?	
							Yes	No
P3. Conduct the Post-relocation Activities								
P3.1	Establish a Workplace Health and Safety (WHS) Plan							
P3.2	Develop and Initiate Workplace Maintenance plan							
P3.3	Develop and Maintain record keeping procedures							
P3.4	Conduct Post Occupancy Evaluation							
(Others) Please specify								

Section (C): Additional remarks (Optional)

Kindly provide any additional information / clarification that might enhance the research, please don't hesitate to mention them in the available area below:

.....

.....

Thank you for your time, consideration and cooperation

Vitae

Ahmed M. Ibrahim known as “IBRA”, he is a professional architectural engineer with work experience in mega governmental and private projects at the Kingdom of Saudi Arabia. His core competency is in construction costs management (estimation and cost control) delivering prestigious projects, working with “class A” construction contracting and consulting companies in Saudi Arabia. He obtained his B.Sc. and M.Sc. in Architectural Engineering from KFUPM, Dhahran – Saudi Arabia. His research domains of interest are not limited to but mainly focused in architectural engineering, smart cities, facilities management, properties management and corporate real estate.

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