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Master's in management

Standardisation of Multi-projects in the Architecture Industry

Tools, complexity, organization, success, and failure factors in multi-projects

Nubia Ixel Vargas Esperon

Content

Abbreviations

et. al_and others
PM _Project Manager

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Abstract.

The Architect's function, among other activities, is to manage several projects simultaneously. Sometimes it becomes difficult to manage the quantity of information on each project and the following actions, so it will require a standardisation of the tasks to avoid losing the focus on activities.

This research investigates the effectiveness of implementing a Project Management Plan for standardisation in multi-projects in the Architectural field. Being specific and straight in the solutions of Architectural Projects is required to improve the quality of the construction works and be more profitable for firms. The research is direct for the Architectural community. The study will have three main subjects to address. The first subject is the benefits of implementing a project management plan for standardisation. The second concerns what is required to standardise by a multi-project firm, including how to manage the implementation. Finally, the success and failure of projects.

The research requires a qualitative method using semi-structured interviews to answer the proposed investigation. The interviewees will be six Project Managers in the construction industry with around ten years of experience managing multi-projects in 30 to 40 min discussions. The leading focus of the finding addressed the relation between the standardisation of projects through the Project Management Plan, the application of business strategies, project success factors and project management standards, practices and processes applied in many projects.

Keywords.

Architecture, Project Management, Standardization, Simultaneous projects.

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Introduction.

Research Topic, Problem Statement

The research study will explore the gaps in implementation and knowledge related to standardising multi-projects in the field of Architecture. The focus on the topic is sometimes neglected by organisations thinking that adopting Project Management plans can generate a short-term benefit. Also, there is little information about how standardisation can apply to funded projects.

The project management program guides follow the current time to plan a project. This tool has been used for a long time in projects such as the Olympic Games, the Great Wall of China, the Taj Mahal, Human beings landing on the moon, and other big projects globally (PMBok Guide, 2017. P.39). The project might be managed in three different scenarios: as a stand-alone project, with a project and within a portfolio. A program comprises undertakings, subsidiary programs, or program activities. Portfolios and projects, subsidiary portfolios, and operations are managed as a group with strategic objectives. Both differ in goals, focuses, benefits, life cycles, and activities. (PMBok Guide, 2017, P.53.). This research focuses on portfolios. Multi-projects with unique, complex, and dynamic contexts produce multi-expectations and require people's experience within and out of the firms. (Martinsuo, Geraldi, Gustavsson, & Lampel, 2020)

The era of industrialisation described standardisation as an instrument. And more recent research is linked with innovation (Lindner et al., 2021). Standardisation contributes to having greater access to markets and innovation solutions, increasing the competitiveness of organisations also in terms of cost savings (Sanjuán, Zaragoza, and López Agüí, 2011). Several studies have shown the relevance of standards for project management, the processes themselves, and the challenges of applying such standards (Lindner et al., 2021).

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Chapter 2 Literature Review

Chapter two explains and summarises the topic of the research question. The proposal will review the literature and analyse it from the organisational point of view of assignment management. They discussed the success and failure of multi-project researchers, including the challenges, complexity, and issues to solve during processes.

Chapter 3 Research Methodology

Will describe the objectives, goals, methodologies, and alternatives in a qualitative approach to managing multiple projects with very different techniques where the main focus will be the instruments and methods.

Chapter 4 Findings

The analysis of the data collected from the interviewees mainly regarding patterns and trends between them.

Chapter 5 Discussion

We will review and analyse chapters two, three and fourth based on themes such as

- Theme 1: Project Management Plan and standardisation and its application to the projects and organisation
- Theme 2: Strategies of efficiency in multi-projects in architecture practices
- Theme 3: Success and failure of the project

Chapter 6 Conclusions and Recommendations

Present the findings concerning the research in question. It will provide the conclusion section and conclude with recommendations for future research.

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Chapter 2: Literature Review Overview

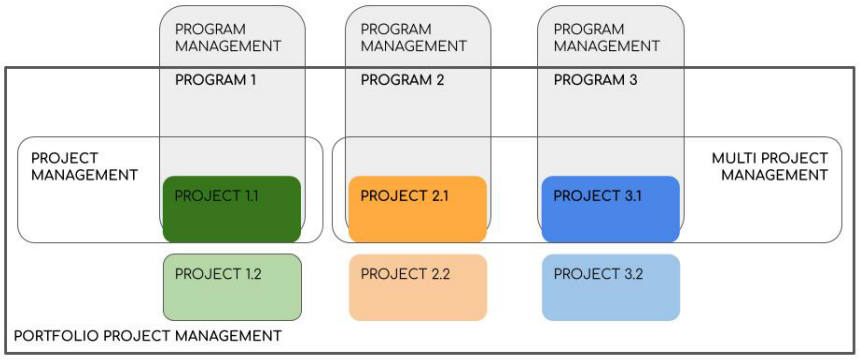
The literature review provides the academic frames on the specific research areas based on the benefits of implementing a project management plan for standardisation and multi-project management. Regarding what is required to standardise the multi-projects and their complexity. And finally, is related to how to manage the implementation and the impact on the following. The Managerial point of view of the challenges is essential while the standardisation of multi-projects is done.

The literature review will frame the research with the following subjects (i) Multi-Projects. (ii) Strategies of Organizational Management. (iii) Decision Making (iv) The complexity of projects. (v) Success factors. (vi) Failure Factors

Multi-projects.

The most likely associated concepts are Simultaneous, Requirement, Features and Management.

Multi-projects Management refers to the selection, planning, control and monitoring of an organisational unit or landscape of a company's portfolio (including all the projects in the organisation). May also several projects are processed jointly as part of the multi-project approach. They are considering possible conflicts between the projects. It is like portfolio managers because it is required to view potential conflicts between projects. So, Multi-project Management is vital to lay boundaries between them (Ribchen C., Engel J., and Grantz J. 2018).



Graphic 1 Multi-projects Graphic, Source (Ribchenet. al., 2018)

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Is the environment in which multiple projects are managed simultaneously; sometimes, when a project is in early phases, some of them are in medium final stages. It is essential to measure the life cycle and rely on the pool of resources. (Miloševic and Patanakul, 2002). Managing multiple projects in parallel with complexities and uncertainties requires a specific context and strategies of alignment and value measures.

Recent management research has noticed the point of view for standardisation and components commonly in multi-projects. They are using platform modules and standard features, intending to get a cost-benefit from it. But at the same time, this might decrease the innovative component for new solutions. It appeared to have different results in cost-benefit and project limitations. (Korhonen, Laine, Lyly-Yrjänäinen, & Suomala, 2016).

There is also a methodology by the physicist Eliyahu M. Goldratt published in the Article Multi-project Management: A Disruptive Model for Optimizing Processes written by Rodríguez and Portela (2017), which states that the solution between the operations management in multi-project scenarios describing as the main idea a solution of instead to deal with all the uncertainties within the organisation is required to share the resources. Regarding the critical chain that needs to do downplays and planning in the execution. When in operation, it is stated that it will start later than the standard procedures to the end to finish earlier. In normal pathways, the traffic of all the tasks is open and depends on the number of tasks currently at the time of the assignment. The difference with this theory is due to the number of waits you encounter. Also, having in count the number of tasks currently. Most companies are with the theory that more projects are better to have the people active. In most companies, most projects are the worst things to get. They describe it as having a GPS that can track the daily rules and priorities. So, to make decisions, classify the tasks by importance. Where the PM has intermediate milestones like a printed map, they become useless when you make a mistake in the turn. So, the principal idea is to develop and implement mechanisms for execution, not to plan and control, where most decisions are made on concepts and rules for performance and not detailed plans.

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The most important thing is the remaining duration, not the progress made; in multi-projects, the weakest link in the processes is the problem-solving capacity, and one of the most common problems is synchronisation. A change of the scope always comes from a customer or an internal department adding a new task to the chain due to a change in the sequence of functions or delays in the requirements. There are a few theories about how to level resources and functions; some of them are that the Project Manager must have a clear idea of the demand and drive the load, and other theories say that the forecast is with precision so they can stay at the point in the correct time. That causes a constant re-schedule. All the projects that may have any deviation that finishes in lots of conflicts are there when the multitasking increases, so Project Managers have the tendency to start as soon as possible to slow down the pace.

So, the theory of Goldratt divides the projects into two parts of dependencies: (i) the resource waits for the task or the tasks waiting for the resource. So, this theory is based on the speedup of the functions, which can be done by reducing waiting times. However, waiting times can be required in the future, depending on the preparation. It may happen most of the time. In general, projects always run behind schedule, rarely ahead. Goldratt describes, "A good multi project management methodology has to take Murphy's Law into account." While on the other hand are theories of Organizational Project Management.

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Strategies of Organizational Management.

The most likely associated concepts are

Processes, Automate, Goals, Roles, Responsibilities and Planning.

Organisational designs are developed to explain the interaction of the elements and layers within the organisation with time, culture, economic politics, and different societal requirements constantly changing. These changes may appear because geopolitics, economies and consumer behaviour adapt quickly. Therefore, organisational strategy and planning of projects have to change simultaneously.

Theory of Project Management Institute. (2017) describes (i) Portfolio management as the centralisation of processes, methods and technologies used by Project Managers to align portfolios with organisational strategies by selecting the right program or project and prioritising the work and resources. (ii) Program management controls dependencies and harmonises programs with the end to catch specified benefits. (iii) Project management defines goals and objectives from an organisational point of view.

From an organisational point of view is integrating portfolio, program, and project management in a firm. (Project Management Institute 2017) The design of the strategic plans must be implemented by decisions related to orientation, efficiency, control systems, technology, human resources, policies, culture, inter-organizational linkages, and others. Strategy intent is all about defining the external opportunities and the overall mission the organisation wants to accomplish. (Daft. 2010). In the Project Management context, Project Manager Portfolios are embedded into their context and cultures, and similarly, single projects are embedded into multi-project operations programs and portfolios. (Korhonen et al. 2016)

One of the most popular models used nowadays is Organizational Project Management Maturity Model (2003), which describes three core practices: acquiring knowledge, performing assessments, and managing improvement. Many traditions and organisations are enabled to archive an evaluation of the

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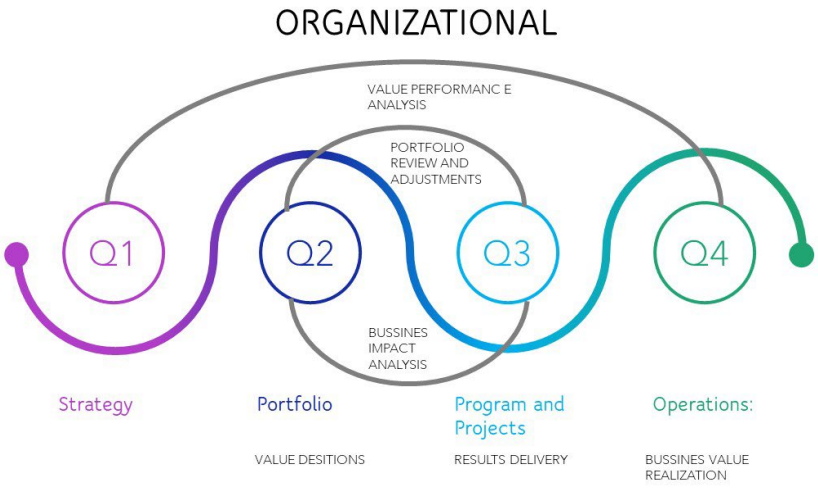
project manager's capabilities and identify an area to improve. Which has never been implemented in an appropriate action plan. (Graf., Seelhofer., 2018).



Graphic 2 Organizational values

Source: Project Management Institute 2017

This theory states that it integrates the Project management principles-related activities within a network of activities. Where the interactions are understood, they must be managed for the organisation's benefit, including the integration of activities with their layers based on hierarchies and networking, strategic decision, business decision, management and plans of implementation. To have good integration with an end on the efficient and economical delivery of their products and services. Where it can be divided into different elements such as (i) the Project governance layer, that is, the legal relations within the institutions, and (ii) the Business integration layer, which is the opportunities that the company is facing being prioritised and selected, (iii) Organisational Project Management governance layer that is the projects and programmes in the organisation, (iv) Organisational Project Manager approach layer that represents the upper management's principles for multi-project management including decision-making, (v) Organizational philosophy layer that are the groups or elements that are present in the market such as interaction with clients, partners and suppliers.

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One of the Project Manager's obligations in the field of Architecture is to contribute to the project's overall planning. The primary responsibilities are planning, programming, controlling and delivering, which correspond to activities such as establishing the design-related client requirements and defining them in a project brief, advising for possibly design undertaking, preparing the design-related aspect for the plan of work, formulating general targets for the design team consistent with the project plan, collating cost and time data from design units establishing a consolidated program, collating contributions from the design units and establishing a tight brief, cooperating with the planning supervision, coordinating activities with the design team. Monitoring and controlling progress, assisting in developing the health and safety plan, and establishing compatible design information interfaces and verification strategies, determining the form and content of the design output. (Dilawer, 2016).

Decision-Making.

The most likely associated concepts are

Knowledge, Alternatives, Logic, Processes, and Characteristics.

Decision-making is one of the problems that must be considered to deal with different projects where the complexity changes with every project. The requirement of deciding must change every time; therefore, the decision-making is getting more complex.

Theories about optimal decision-making must consider risks, constraints, evaluation of similar problems, and others. But not all our choices are pure logic; managing multiple projects simultaneously will be a challenge every Architect needs to face. In decision-making, there is a relationship between the rational and the irrational. One part drives theoretical rationality, and the other is driven by irrationality, risk, choice, and uncertainty. (P 139 Sund, Robert and Huff, 2016)

On the other hand, the emerging theories address the processes of strategic decision-making as more complex than simple rules. The decision-making under uncertainty is instead contained in categories. These are the single rules which

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give direction to the company. Rule patterns as organisational and emotional handling come from experiences. (Szpiro, 2019). The categorisation of the Project manager in Architecture practices must maintain order and flow in their job. They are making decisions related to the administration and design of the projects. Also, the result of the lack of methodology can and is used in firefighting. (Milosevic, 1997)

Implementation of a Project Management Plan has been researched in many studies. As a result of that are a variety of models such as linear programming, queuing theory, forecasting, inventory flow, and other complex models in constant development. One of the biggest barriers was that many of these models are not currently being used by the firms. As a result, research has been developed on which companies accept and implement processes. Incorporating three criteria: Technical Validity which is the assessment to evaluate if the project works are intended to work; Organizational Validity which is whether the project is right for the intended client and Organizational Effectiveness which is concerning determining if the project has been used and whether has been an improvement from the last statement. (Pinto and Slevin, 2015)

An effective managerial strategy can make possible gains as being the first into a new market to reduce costs, increase sales and improve competitiveness and profitability. One of the project manager's problems in architecture is that every project has a distinction. So, the argument says that every project needs a different methodology to establish policies and procedures to deal with specific projects. Multiple projects sometimes require practices and policies, so developing an exclusive strategy is difficult. Despite that, the design and implementation of methodologies have a high demand for expertise and resources. (Milosevic, 1997)

Some authors also believe that multi-project organisations prefer to use a hierarchical and technical system to reduce knowledge loss. Adding high levels to aggregate and build new competencies will reduce the risk; of managing critical knowledge (Dotsenko, Chumachenko, and Chumachenko, 2019).

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Engineering sectors are also very similar to the architecture industry in the case of high competition against organisations. There are different approaches to profitability; some suggest dividing the project into around seven phases with ten milestones each and doing a checklist for every milestone. (Mueller, Riedel, Domagk, Barnstedt, & M; 2020). Also, that might create dysfunction of communication in the phases.

Another author aims for future studies relating the understanding of project management in multi-projects from the perspective of a system of complex relationships with people's behaviour in a certain way by a narrative and routines used across different levels of organisations (Mikkelsen, 2020).

Developing a project involves several tasks such as finding funds, preparing the plan, doing reports, and meeting with the stakeholders; the amount of work done in the first phases can develop into troubles in the developers' personal lives. As an exception, there are practices to avoid overload. For example, assigning a member to answer all the external project requests and having a tight schedule for the meeting; having the meeting prepared before saves time. It is also less time-consuming working on the tasks list every day. (Delisle, 2020). The study in this paper is where the interviewee will answer the strategies of tasks for them and what is helpful for them and what is not.

Project complexity.

The most likely associated concepts are

Value, Project Risk, Specialisation, Resource, Technology, and Scope Creep.

Complexity is the term that indicates the difference, size, uniqueness, and where the project makes the difference. However, the field of Researchers lacks complexity definition, and the term's ambiguity is not defined yet. Complexity for one person can be very different from another.

Some of them suggest analysing the progress of parts through manufacturing and measuring the obstacles presented in the process. In that case, there might

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be a lack of human resources measures, which is also one of the most variable factors in the projects. There are where the metrics are numerical attributes from parts of the projects. It can be as simple as weight, size, temperature, and others. It helps to make comparisons and predictions in particular situations. (Sinha, Thomson, & Kumar, 2001)

Interrelations between the project's components are more complex than traditional thinking. Sources and factors may contribute to an increase in the project's complexity. Other authors use four sources of complexity employed: resources, environment, level of scientific and technological knowledge and several different parts of the workflow. (Mikkelsen, 2020). Hamdi and Thomson 1999, describe qualitative methods for the extent the which management is working with the projects that are described as: (i) Intuition: They described a project manager's feeling that the activities should be more complex than the current project. It is a decision based on previous experience and should not be discouraged. (ii) Sensitivity: All activities should have a unique complexity value. Any action should be of the same value as others. (iii) Consistency: The complexity of a particular activity must not be more complex than the project (iv) Generality: The project should be decomposed into parts. (v) Simplicity: The project should be easy to interpret and justifiable.

On the other hand, Complexity is described by Yugue & Maximiano 2012 in the article "Project Complexity and Management Processes". There are two reasons why complexity started getting attention: extensions of improvements of previous projects or products and increasing project restrictions regarding the industry expectations and changes. Also, it is caused by delays, cost overruns and reduced user satisfaction because it is related to expectations and decision making. Some authors have agreed that is a classification of two types of complexity: the Organizational and the Technological in turn, they are operationalised in terms of differentiation and interdependence, goals and objectives, stakeholders, management practices, division of labour, technology, concurrent engineering, globalisation context and dependency, Diversity and Ambiguity, and flux are some of the terms that can be defined as the complexity.

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Still, not all of them can apply in general to all the projects. Complexity is perceived and interpreted by project managers allowing them to differ in the interpretation of complexity. I have also developed complex models that are an effort to find the most appropriate managing model depending on the project.

(i) Goals and Methods Matrix are four types of projects. (i.i) Type 1 projects in which goals and methods are well defined and understood, where the manager's role is as conductor. (i.ii) Type 2 are projects with well-defined goals but poorly defined methods; the project manager's role is as a coach. (i.iii) Type 3 are projects with planned life cycle stages with poorly defined goals but well-defined methods, and (i.iv) Type 4 are projects with no defined goals and no defined strategies.

(ii) Stacey agreement and Certain Matrix analyse the complexity in two dimensions: the degree of certainty and the level of agreement. Dividing the matrix into zones (ii.i) where there is close agreement and near certainty: are simple projects where traditional models work well with the project. (ii.ii) Far from the agreement but close to certainty: the case where coalitions, compromises and negotiation are used to solve problems. (ii.iii) close agreement and far from certainty: leader approaches must be used to solve the issues in this type of project. (ii.iv) far from the agreement and far from certainty: the zone of anarchy with high levels of uncertainties and traditional methods is not allowed. (Mikkelsen, 2020).

Despite the term, not yet a defined consensus is required, and the great importance for the managers to start by measuring the project. It would help to address problems in their processes. (Sinha et al., 2001) There are a few consensuses related to complexity; for example, size is traditionally considered the primary cause of complexity.

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Success Factors of Projects.

The most likely associated concepts are

Cost, system, control, time, design, engineering, development, planning, schedule, quality, system, data, decision, and performance. (Pollack, Helm, and Adler, 2018)

Project success can be subjective within the interdependence of his proper scope. Also, a lot of the definitions regarding success and failure are subjective to the view of the person, client, stakeholder, etc. This research is using the description of Pinto and Slevin (2015) in the journal Publishes by Project Management Journal ``Project Success: Definitions and Measurement techniques where there are lots of ambiguities in the definition where for example, all the people know a project that came in on time and under budget and were considered project failures and projects that came late and over budget that is complete successes. Some projects are defined as complete failures and, with time and acceptance of the users, become an overwhelming success.

Other organisations include client satisfaction as a measure of the project's success. Most of the time is measured by subrogates as many complaints as possible or sales; others are implementing surveys to determine client satisfaction. The statement says that before defining the success of a project, it is best to explain the project "A project is an organisation of people dedicated to a specific purpose or objective. Projects generally involve large, expensive, unique, or high-risk undertakings that must be completed by a particular date for a certain amount of money within some expected performance. At a minimum, all projects must have well-defined objectives and sufficient resources to carry out the required tasks.

In past times, the concept of the Iron Triangle or triple constraints on how the world understands the success of the projects has three main areas of study: time, costs, and quality. Atkinson stated that all projects measured with the Iron Triangle had been measured at the delivery stage (1999). New concepts have

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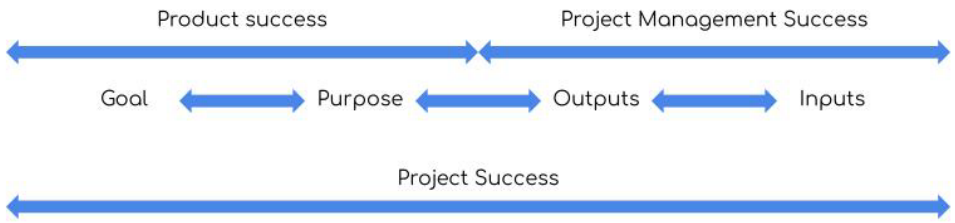
emerged, and now it depends on the conditions and time when ideas should be implemented.

The Logical Framework method theory describes the effectiveness of the degree to archive the project's objectives. Depending on the project, the goals must change to satisfy stakeholders, and the project's purpose is directed to the users and their function. Where is divided the product success from the project management and subdivided into goals, purpose, inputs, and outputs given as a result that the evaluation of each section of the whole process is the project success (Mikkelsen, 2020)



Graphic 3 Project success Source (Mikkelsen, 2020)

Criteria for success must be divided into stages.

When it is time to deliver a solo project, several authors agree that the cost, time, and quality should be used as success criteria but not exclusively. Authors at the Post-delivery stage identified six success system criteria: system quality, information quality, information use, user satisfaction, individual impact, and organisational impact. (Atkinson, 1999). However, now, to work with multiple projects simultaneously, resource allocation, formal project selection, and prioritisation within other resources are the managers can use in the operation of multi-projects. Removing unnecessary workloads, working as a multitask, and shifting the attention from project to project. (Miloševic et al., 2002).

Cross-functional team-based organisations, as Architectural practices, must deliver an entire process or product to each client. The statement says that Project Management does not use traditional, functional teams, so performance measurement can be named an essential criterion. (Atkinson, 1999).

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Another issue to tackle is the interaction between projects to minimise the objective of the group's success. It will be more an idea of collectively than an individual project. (Miloševic et al., 2002). After a lot of research, it is concluded that the project's success is much more complex than simply meeting cost, schedule, and performance. The definition is: In the long run, what matters is if the parties associated with and affected by a project are satisfied. (Pinto and Slevin., 2015)

The correct application of multi-project management allows the manager to use synergies and resources across projects and a combination of experienced employees. (Ribchenet. al., 2018)

Failure Factors of Projects.

Project failure is defined as the termination of an initiative because it has fallen short of its goals (Lameijer, Jiju, Borgman & Linderman 2021).

The most likely associated concepts are

Lack of commitment, support from top management, communications practice, inadequate training, tools and techniques, inappropriate rewards or culture, scope, team size, and lack of monitoring. (Jiju and Sandeep, 2018)

When the manager has many similar projects, the challenges of inefficient scheduling, managing resources, and managing costs are prevalent. Problems can result from various reasons such as unrealistic planning, wrong priorities, and inadequate project structures. (Ribchenet. al., 2018), Some authors explain that it is always possible to consider two types of error; the first is where something is done wrong, such as poor planning or inaccurate estimating. The second type is about the forgotten or not done like incomplete criteria, the sin of commission and omission. However, type II is almost impossible to find because how do you find what you are looking for? And despite that, some creative thinkers can find a way to find the error. (Atkinson, 1999)

Defining failure is also very subjective. Companies are in constant failure, often using resources each time the project fails. When in their desperation, they call

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expensive consultants to understand what is getting wrong with the projects. An article by Discenza and Forman publish (2007) describes seven causes of project failure: how to recognise them and initiate project recovery.

The assumption in this article says that failure can happen in each organisation, and there are an infinite number of reasons why the project can fail. Sometimes, it is in the hands of the responsible team to do the fixation and for others where it is not in their hands. The explanation says that the most commonly fails are caused by a lack of attention and efforts being applied to seven performance factors:

Focus on business value, not technical detail. Establish clear accountability for measured results. Have consistent processes for managing specific checkpoints and coherency in planning and executing strategies. Include the customer from the start of the project and continually involve the customer. Manage and motivate people so that the project efforts will experience a zone of optimal performance. Provide the project team with the tools and techniques they need to produce the project.

These seven performance factors can be classified into three board categories: People, Process and Communications. They described assessments that can be done in the team, processes, and communications to evaluate why the project is getting out of control or failing. Also, it must include the WBS, a responsibility assessment matrix, signed work orders and subcontractors, performance metrics, control accounts, time reporting, and copies of deliverables and receipts. Project schedule. Project plan. Statement of work. Risk management plan. Change management plan. Financial plans. Reports and others.

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Chapter 3 Research Methodology

Aims.

The research aims to study the failure and success of multi-project organisations within systems standardised in the architectural industry as the project manager of their organisations. They focus on academic journals, industry research papers, and the Manager's multi-project perspective and organisational strategies.

Research Objectives.

The research will have three main subjects to address.

1. The benefits of implementing a project management plan to standardise multi-project organisations. (Chain, lifecycle, programmes, and alignment)
2. The second is about what is required to standardise multi-project organisations. (Failures and success.)
3. How to manage the implementation of standardisation or Project Management plans in multi-projects. (Change Management)

Research Methods.

Conducting research is deciding how to address the analysis. (Walle, A. 2015, P.9). The case presented in this research will pursue two main phases.

Phase 1. Descriptive, related to Project Management approach chain, lifecycle, programmes, alignment, multi-project, complexity statement, failure, and success of projects.

Phase 2. Qualitative research in which Project Managers will be invited to have In-depth interviews. They will describe the approach and research methods while designing a project management plan of this kind.

There are many methodologies and frameworks. That all of them have advantages and disadvantages. There is one beneficial thing that is called the research onion. It consists of layers of frameworks covering specific concepts of the study.

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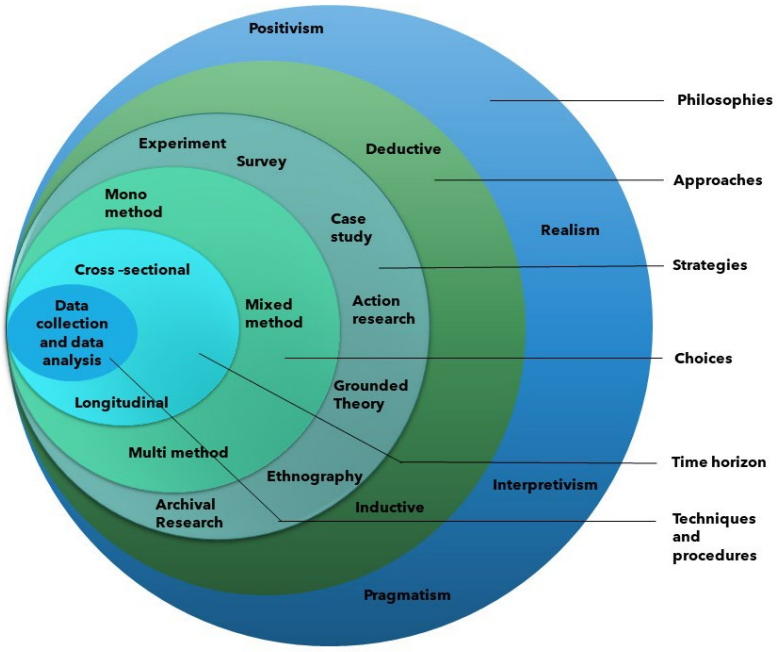

Graphic 4 Research Onion

It is divided into six main stages that are (i) philosophy, (ii) approach, (iii) strategy, (iv) choice, (v) time horizon, and (vi) analysis. Those will enable the researcher to choose an appropriate research method for the investigated question. The analysis of the multilayer from the outside will require a review of consideration and the core critical data collection. Research philosophy: Researchers have a different view of the world, making assumptions about human knowledge for granted. Taking other realities is how a research question is raised. (Saunders, 2012)

A researcher concerned about predicting and observing outcomes is like a laboratory scientist. The researcher is the person whose concerns are causes and effects, reflecting the philosophy of positivism. Scientific methods are the proposed and tested theories in a structured way.

Realism is another philosophical position associated with researchers. It stated that reality exists independent of the mind. The findings and senses show the truth. It is also divided into two forms (i) Direct realism that is experienced through the senses and provides an accurate representation. (ii) Critical realism argues

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that the initial senses and the structures and relationships underlay the complexity.

Interpretivism relates to the study of social phenomena in their natural environment. They are focusing on doing research around people rather than on objects adopting and understanding the social world.

Pragmatism focuses on the importance of the study in the findings with practical consequences. They consider that no single point of view cannot give the entire picture. They assumed that there are multiple realities.

This research will take interpretivism with the approach Inductive and the strategy of in-depth Interviews with time horizons as cross-sectional. Technical and procedures are the data collection and data analysis. This research will investigate the Project Manager Strategies for standardisation and implementation and their effects on project success.

Research Approach.

For one part, research onion (Saunders, 2012) describes deductive and inductive approaches. Deductive is going from the general to the particular, generating conclusions based on a logic system.

On the other hand, the inductive approach follows the reverse logic of inductive data collection and then makes the insights based on the data.

For this approach, the method will be inductive to the data to the senses. It is also generally associated with a qualitative approach.

Research Strategies and Alternatives.

An appropriate research strategy (Saunders, 2012) involves the researcher's ability to use more than one strategy throughout the process. A qualitative research interview is a kind of research that practices, and standards require to be recorded, archived, challenged, and reinforced. Depth interviews are utilised extensively as interviewing formats, possibly in groups or individuals.

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Research Choice and Instrument.

Qualitative and Quantitative research differentiates in collecting numerical and non-numerical data. Where qualitative designs are described as phenomenological instead of numerical. (Saunders, 2012). The research question motivated by qualitative research involves articulating how a study will contribute to the literature and framing a clear and compelling research question. The implication for data collection is about how they are collected, how they are analysed and how they can be used concerning the theory. (Grenville, Nelson, Vaugh, and Zilber 2021)

Qualitative methods try to understand, observe, and interpret natural settings. Aiming to have an explanation for social phenomena is also the understanding of the world that we live in. The foremost Researchers of qualitative studies are that it allows observation and assessment of body language, sound, personality, and language having a whole picture that is not possible through quantitative research. (Padraig, 2017)

Quantitative analysis, despite a direct channel into the people's retrospective, has one of the challenges of relying on memories, beliefs, and motivations often from the past, which can be a misfit in the research. (Grenville et al., 2021). Because qualitative research is willing to understand the world around the research question, this research aims at qualitative research.

Data Collection Methods and Data Analysis.

Coding Qualitative Data

Inductive Coding (Grounded Theory) Skjott Linneberg, M. and Korsgaard, S. (2019), is the most vital tradition in qualitative research because it develops codes from the data itself using phrases and terms used by the interviewees. This way, the principles stay close to the data depending on and reflecting the information that is direct from it rather than ideas. It is described as breaking up and getting an abstract at a higher level. It is also recommended for an exploratory study rather than a theoretical one and is very attractive for capturing the diversity and complexity of information. The codes recommended are between fifty to seventy

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initial phases. In the second phase, a higher understanding of the information can finish in the categories or themes. It is where the researcher may create theories that can relate to the studied phenomenon.

Deductive Code, in this case, has the advantage of being utterly loyal to the information collected but can risk lacking focus or being too complicated. Where helps this process to have a refined focus of coding (coding frame) before starting the data collection. This approach focuses more on research theory because it is often related to theory refinement or testing. Therefore, are drawn from the existing literature.

In practice, a combination of both (inductive and deductive) are the most used approach, referred to as a blended approach. This research is based more on the deductive method, although focused on the researcher's intention.

Hypothesis.

The research question originates from the problem addressed by Ordoñez, REC, Vanhoucke, M, Coelho, J, Anholon, R & Novaski, O 2019, 'A Study of the Critical Chain Project Management Method Applied to a Multi-project System'. Where they conclude that being delimited by the resources, the Critical Chain Project Management helps create a better workload distribution and facilitates the flow of activities. This research discusses whether such flow might change by the dynamics in multi-projects with different scopes, such as architectural projects. There is also a methodology by the physicist Eliyahu M. Goldratt published in the Article Multi-project Management: A Disruptive Model for Optimizing Processes written by Rodríguez and Portela (2017). Where states that the importance is reducing the administration waits per answer response times and previews preparation.

Research Question.

"How can project management and standardisation improve multi-project's working process in architectural organisations?"

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RO1: to investigate how project management plans and standardisation are set in the multi-project's environment.

Theme 1: Project Management Plan and standardisation and its application to the projects and organisation

1. How many projects do you have currently, and what is their complexity?
2. Can you describe how a Project Management plan or standardisation has been implemented for your team?
3. How are teams formed? How are workloads distributed? What is the rationale for this?

RO2: to research strategies of efficiency are the tools to use in the day-to-day work

Theme 2: Strategies of efficiency in multi-projects in architecture practices

4. Do you have a process for decision-making? If so, how does it work? If not, how are decisions made and implemented?
5. Can you describe any efforts to automate, simplify or save time?
6. Does the amount and complexity of projects cause feelings of overwhelm, and if so, how do you deal with them?

RO3: What makes a project succeed or fail, and how creativity affects the process

Theme 3: Success and failure of project

7. From the point of view of the designer, could you discuss if standardisation has an impact on creativity?
8. In your opinion, which are the critical factors for the failure or success of managing multi-projects?

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Planning Review

1) Definition of inclusion- and exclusion criteria, fields of research, sources, and research terms
2) Conducting review
    i) Searching journal databases
    ii) A quick scan on in and exclusions criteria
3) Review on criteria
    i) Reporting and Dissemination
    ii) Synthesis and reporting article

In-depth Interviews.

Interaction involves the interviewee and the interviewee's dialogue. It tries to understand the subject, experiences, and impressions thoroughly. (Wheeler, 2021). The conversation with the participants is planned to be done through face-to-face interviews. (Morris, 2015) Considering the Worldwide restrictions, face-to-face interviews might be challenging to obtain for all the interviews as is required. So, some of them will be done either by internet or telephone.

A semi-Structured Interview.

is Defined by the interviewer's topics that need to be covered and ram projectable to a more conversational interview. (Morris, 2015) Using this tool helps create confidence in the interviewees that can transform into an open conversation required for the research question, thus creating a narrative that can drive answers.

Participants.

Tactical decisions must be related to the degree of manipulation of the observer phenomena and the process of recording the evidence and data. (Walle, 2015, P.9). The interviewees will be six working construction industry as project managers with around ten years of experience. In interviews of approximately 30 to 40 min of duration. The leading focus of the finding addresses the relation between the standardisation of projects through the Project Management Plan,

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the application of business strategies, project success factors, and project management standards, practices and processes applied in many projects.

Participants: Architects working as Project Managers in different areas of the industry.

Sampling and Pilot Test.

The Interview will last around 30 to 40 min, with approximately ten questions as a script; the document will have complete anonymity for the participants.

Ethical Considerations.

In the present research, the participants and the organisations involved have no risk from their work. Before the interview is scheduled, send a letter of a non-Disclosure agreement that states the information that can be realised and not from their company, including the names of the participants and the companies. All the participant's interviews were recorded and transcribed. All the details are deleted from my phone and computer to ensure the confidentiality of the participants.

Research Limitations.

The limitation aims to frame specific questions related to different projects managed by the participants. The primary end is related to the premise that the interviewer might contract a world of integrity that is usually not easy to check. (Morris, 2015). Thus, the investigation will be focused only on the research question.

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Chapter 4 Findings

The interviewees were selected for their knowledge and expertise.

A. Architect working as Project Manager for refurbishing the network in banks.
B. An architect is the Director of Retail of Latin America's multiple sections, including industrial, refrigeration, banks, automotive, post office, and others.
C. An architect is RIAI Director working with projects including housing refurbishment, conservation, and fit outs.
D. Architect Project Manager working with retail, financial groups, casinos, and other projects.
E. An architect is working for banks, including refurbishment and new sites.
F. An architect is working as a Project Manager with casinos.

Analysis.

This section details the findings from the semi-structured interviews that the researcher conducted. Data collected was analysed by the Thematic analysis initially developed by Virginia Braun and Victoria Clarke in the journal of Skjott Linneberg, M. and Korsgaard, S. (2019). The research represents insight, experiences, and views from the participants. The strategy for data interpretation in this section is to study themes and questions to emerge as the data are coded and analysed by the researcher.

The process of this analysis is to do a code from the answer of the participants in the first stage to remove the connectors and propositions given as result keywords. The second stage is to understand and charter the similarities in words. For example, if the participant says:

> 'Yes, I feel overwhelmed when there is too much work and not enough time and no team.,

Primarily the keywords that are the codes marked in colours will be put on a table for each question to compare answers with the other participants. Then in the

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second stage, the similarities will be chartered and analysed and concluded with the highlights of our participants' comments.

Theme 1: Project Management Plan and standardisation and its application to the projects and organisation

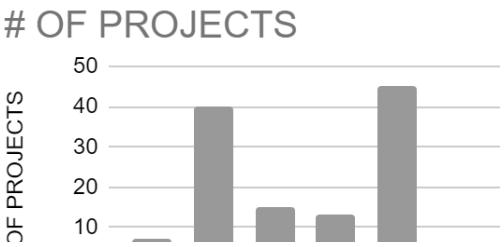
Q1. How many projects do you have currently, and what is their complexity?

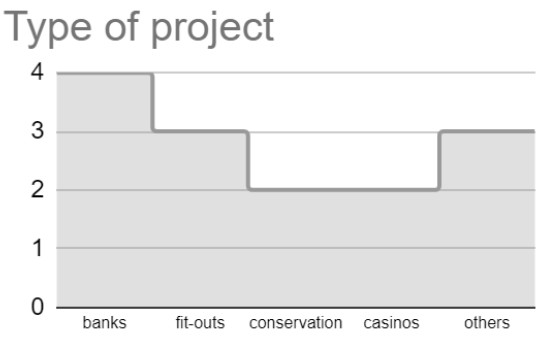
This first question is to understand the kind of projects that the interviewees work on and how they are in the understanding of complexity.

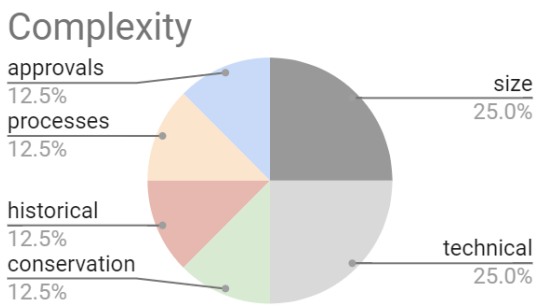
Q1	# Project	Keywords				
1	7	refurbishment	conservation	fit outs	reductions	banks
2	40	industrial	refrigeration	construction	retails	refurbishment
3	15	fit outs	extensions	refurbishment	housing	conservation
4	13	Retail	banks	casinos		
5	45	Banks	openings	refurbishment	moving	
6	3	casinos	refurbishment	maintenance	openings	

Table A, Q1

Answers we can see that our participants work with between 7 to 15 projects at the time, the higher ranks are with more than 40 projects.







Graphic A1, A2, and A3

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The types of projects are primarily banks, fit outs and other projects related to conservation, housing, and casinos. Regarding the complexity, the participants have comments about the technical solutions or the size of the number of specialists working on the project as per conservation or historical projects.

Participant 'b' commented: 'Complexity: 30% low complexity. Referred to the size and level of expertise the people need to work on.'

Participant 'c' commented: 'Different complexities are higher for conservation and historical projects.

Participant' d' commented: 'The complexity is measured by square meters.'

Now the understanding of project complexity depends on the world and scope that the project manager is required as we see now only in the solution in the projects s technically. Another level of complexity involves more people as per consultants or the same communication with clients. As vague will be the client's idea, the project manager has the feeling of more complexity for the solution.

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Q2. Can you describe how a Project Management plan or standardisation has been implemented for your team?

The participants have different areas to implement standardisation, depending on whether it is a cooperative environment or elaborating bespoke projects. The places where the bespoke projects have more implemented the standardisation in the phases that are required order of information and technicalities. On the other hand, for companies with more rigid environments, the implementation of standardisation is for the entire project.

Q2	Keywords										
a	divided	two parts	client's process	internal process	queries	information	quotes	reports	deadlines	times	step
	process	based	times	respose	approvals	design	financial	requirements	permits	longer time	
b	playbooks	workflows charts	divided	phases	processes	responsible	task	service level	agreements	scope	times
	costs	implemented	worker	know	processes	manuals	project standards	formats	follow	process	explained
	procedures	fill projects	graphic	tendencies	process	critical point	areas	opportunities	typify	collect	risks
	responsibilities	formats	same	chats	groups	follow	information	time	people involved	know	part
	roles and responsibilities	communication channels	Defined milestones	path	identify	stoppers	project	trained	skills of negotiation		
c	procedures	RIAI statement	implemented	documents	Templates	implemented	process	tender stage	first stages	challenging	manage
	established process	differ	followed	time	design agreed	implementing	documents	design stages			
d	methodologies	start to the end	working groups	control processes	specialists	development	goals	order	presentation	scope	rely
	tools	abilities' team	sequence	organised	particular order	allows	team	minimise mistakes	affecting	client's progress	work
	quality	control	parts and pieces	project	implement	standards design	client	plan	depend	creativity	check ups
	feedback	Checklists	archive scopes	approvals	client						
e	two areas	programme	administration	operation	Risks	generated	projects	business	design	execution	clousures
f	start implementing	developing	project management plan	standars	surveys	tenders	approvals	pre-planning	planning	tender	investment plan

Table B, Q2

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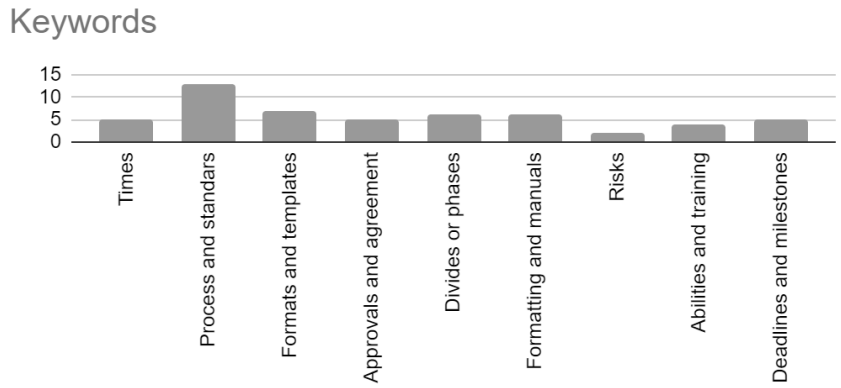

Three of the participants have a specific name for active implemented processes. Also, the same quantity of times is mentioned that the process is divided by participants' a',' b', and 'd', as noted by participants in their plan to implement in stages. Participant 'c' said that it is implemented in one stage. Formatting and manuals are mentioned by all the participants as the same as processing. Times were a concern four times by three of the participants.

Graphic B1

Three participants also said the detection of the milestones or the deadlines. Assessment of risks only twice in the six conversations. Creativity was mentioned only once by participant 'c'.

Participant' a': commented: 'The first is the client's process, and the second is the internal process.'

Participant 'b' commented: 'Playbooks implemented in the projects, workflows and lifecycle of the projects are divided by phases of the processes and who is responsible for which task. At first, the projects are service level agreements where the scope, times, costs, and others are implemented.'

Participant' d' commented: 'Work methodologies in the office follow from the start to the end with working groups and control processes... We define the project in goals which are order, presentation, and scope.'

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Implementation of procedures is always a challenge for the project managers; participant 'b' commented that the more projects assigned, the more specialised the people following the assignments. Therefore, more efficient the team is when they reach a high number of projects per person.

Q3. How are teams formed? How are workloads distributed? What is the rationale for this?

The motivation to divide groups depends on the size; with more projects, the participants have more divisions within their companies. Participants d and b commented that the clients set up the time of the deliveries, and they need to go back to do their planning to arrive at the delivery on time and with the required quality.

Q3	Keywords										
a	Internal team	PMP	PMs	Cost PM	Design PM	Documentation PM		Contractors	Designers	specialisation	
b	People for each project	PMP	PM's	Preconstructi on	PM's Construction	PM's buyers	Supervisors	Coordinators	Logistics	IT-Team	
	PMs per building	PMs per project									
	analyses	volume	project	times	crumble	into	number of people	project needs	more efficient	profitable	smaller groups
	diversify tasks										
c	internal team	external consultants	structural engineers	quantity surveyors	energy consultants	landscaping	contractors				
d	internal team	external consultants	structural engineers	voice and data	surveyors	electric engineers	air conditioners				
	PMs	project leader	analysts	support team	cooperative groups	loads of tasks	expertise people	organise	work	depending	abilities
	times setted by client	define logistics depending	scope	quality							
e	directors	finances	systems	supplies	Pm's	Subcontractors					
f	Projec Manager	project leaders	cuantification	supervision	facilities	assitant					

Graphic C, Q3

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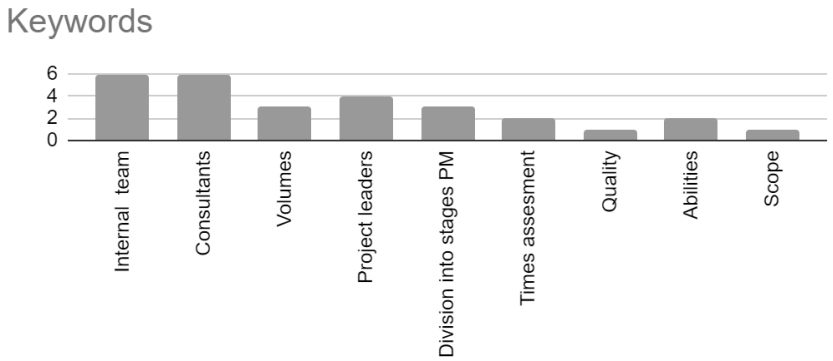
All the companies have two things in common; they have an internal team and consultants to support them; three of them are concerned with the volume of the project, quality only two and time assessment four of them. The exact quantity of PMs is based on a load of projects by the abilities of their team.

Participant 'b' commented: we do an analysis of the volume of the project and times. Most of the clients have defined the date of the delivery so it is required to crumble into the number of people the project needs and when. More projects mean the team becomes more efficient and profitable than smaller groups.'



Participant 'c' commented: 'We also rely on the expertise of the people working inside and outside of the organisation. So, we organise the work depending on the abilities of the people. Times are most of the time set by the client, so we need to define our logistics depending on it.'

Graphic C1

The importance of not overwhelming the team with unrealistic scopes is one of the main labours of the project managers. They try to visualise before the scheduling time arrives, raise a hand, and tell the client why delays are one of the main things. Also, be honest with the projects that are the company's capabilities.

Abbreviations

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Theme 2: Strategies of efficiency in multi-projects in architecture practices

Q4. Do you have a process for decision-making? If so, how does it work? If not, how are decisions made and implemented?

Participants commented on some strategies to make decisions, which can be financial, as participant 'a' and participant 'b' talked about prioritising the important and the urgent. Participant 'c' used the client's involvement when the next participant commented on the importance of logistics and strategy; participant 'e' consolidates budgeting as essential, and lastly, participant 'f' relates to having in mind times, budgeting, scope and schedules.

Q4	Keywords									
a	financial highest	decisions	politics	client	times					
b	not memory	list	levels	details	Important	urgent	important-urgent.	critical	essential	crucial
	Follow milestones	quality	communication							
c	minutes	record	written confirmation	client	decision	agreement	decisions	builders	site	consideration
	possible solutions	problematics	opinion	consultants	client					
d	Logistics	strategic	planning	management	careful	accept	assignment	complexity	requirement	time
	processes	require	excellent	quality	delivery	being honest				
e	going	assigned	project	evaluating	companies	consolidating budgeting	evaluations	technological	economical	location
f	times	developing	plans	construction	complexity	size	scope	schedules	decision	cost
	quality	taste	client							

Table D, Q4

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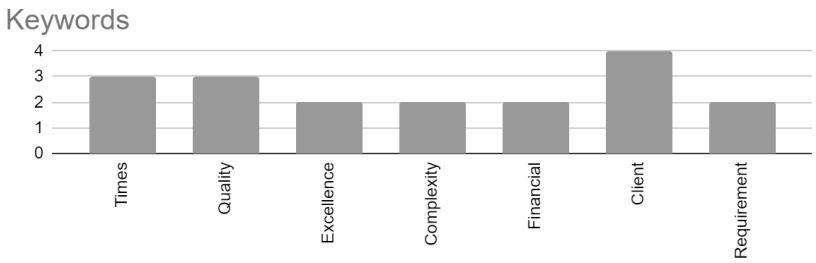
Regarding the decision-making in their project, the participant's big concern appeared to be the client's opinion, which is where we have more deviation in this question; secondly, the quality and time, and lastly, the excellence factor, financial and complexity.



Participant 'a' commented: 'Yes, where the financial part is the highest to make decisions, followed by the politics of the firm and client, and finally the times.'

Participant 'e' commented: 'Yes, it is first who is going to the assigned project by evaluating the companies and consolidating budgeting.

Graphic D1

They also emphasised the importance of communication and logistics to find the best solution for a specific problem.

Depending on the scope is the concern of the participants where there is a scheduled delivery they are always trying to finish on time with the quality and within the finances required.

Q5. Can you describe any efforts to automate, simplify or save time?

Participants relate different strategies to automate their work; interviewee 'a' is double-checking the process constantly to remove the duplicity of the methods. Participant 'b' remembered that no procrastination is a good strategy to follow to check the feasibility of the projects and prioritisation of tasks. Participant 'c' uses documentation and templates to save time. Participant 'd' used unification of criteria in the teams to format the project and follow schedules. Participant 'e' use

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control budgeting, scheduling, and evaluations. The last participant strategy is to divide the day on the scope to archive every day.

Q5	Keywords									
a	Check	internal processes	remove duplicity	methods	procedures	correctly	functions	none in place		
b	No procrastination	clear objectives	measurable	feasible	Reminders	schedules	important	Follow processes	prioritisation	
	clearly	understand	project							
c	looking	automate	design processes	Templates	examples	things	cannot automated	bespoke tailor	solutions	automated tenders
	prepared	documents	valuable	save time	manage	Diversity	different	scope		
d	feedback	unify criteria	format	standardise specialist	simplify information	follow schedules	double-check information		new technologies	
e	processes	phases	projects internally	controls	budgeting	scheduling	evaluation	ubcontractors	avoid deviations	costs- times
f	days divided	every part	scope	solve problems	project	facilities	administration			

Table E, Q5

In this research question, the participants have not gotten a conscience between the ideas of how to automate. There are a few keywords constantly mentioned, starting with processes that are mentioned six times for three of the participants. Also controls have four mentions as well with three of the participants, simplify information and schedule is the secondary in importance and finally the checking.

Participant 'b' commented: 'Objectives have to be measurable and feasible.'

Participant 'd' commented: 'Ask for feedback, unify criteria, format the project, standardise the specialist, simplify information, follow the schedules, double-check information, and add new technologies to the evolution of tools.'

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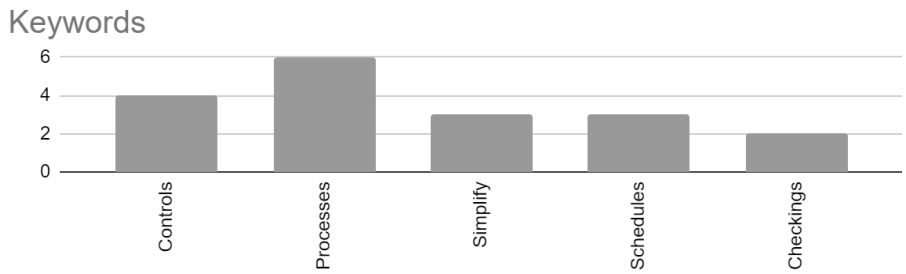

Graphic E1

Another of the comments was the use of the latest technologist as a time saviour. Having clear objectives is another essential comment. Having remainders, participant 'b' highlighted the importance of that task if the project manager currently has many multiple projects.

Theme 3: Success and failure of project

Q6. Does the amount and complexity of projects cause feelings of overwhelm, and if so, how do you deal with them?

The sense of overwhelming is a feeling that all the participants relate in multi-projects coming from different parts when they are not reaching the list that they need to deliver for participant a, when the clients do to know what they want is for participant b, for participant c has projects on hold because they commit resources. Participants d and f are a load of work and do not have enough team to cover. Also, they have different ways to deal with that participant 'a', 'd' and 'e' prioritise; participant 'b' deals with id with negotiating the scope and talking about it. For participants, 'c' is sometimes having to refuse a project. When for 'f' is the organisation.

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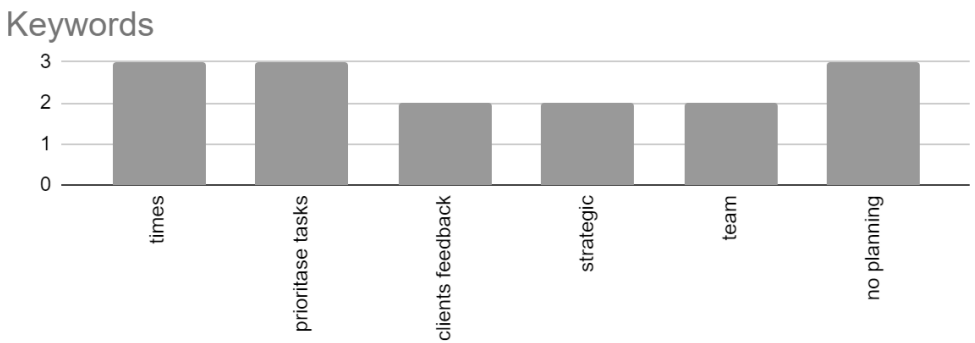
Q6	Keywords								
a	times	administrative	task	side	priorisation				
b	clients	no clear	scope	team	not been team players	more work	deal with	team no efficient	negotiation
	strategy of convincing	documentation	transparency	choose correct people	great actitude	talk about	problems		
c	on hold projects	commit resources	immediate responses	focused	reactions	feedback	refused assigments	diagram to choose	four keys
	realistic projects	big spirations	no budget	bussy	atractivness of project				
d	Shield of client and company	add projects	prioritise tasks	delegate responsabilities	organisational scheme	strategic planning	different phases	many deliveries	asses work loads
e	no planning	many projects	simultaneos	move times	prioritasion tasks	prioritasion budgetting			
f	too much work	not enough time	organasing	on the way					

Table F, Q6



Graphic F1

The worrying feeling regarding times, no planning and prioritising tasks is the most commented on, client feedback, team and strategic decision but in this case, present more like same worries in all the issues.

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Participant ‘b’ commented: Dealing with overwhelming feelings needs to negotiate the scope and do a strategy of convincing, documentation and transparency. The team is more to choose the correct profile from before. He prefers a team with a great attitude to lots of experience.’

Participant ‘f’ commented: ‘I must measure times in developing plans and construction, and it is set by the complexity and size, also depending on the scope, set the schedules for projects, facilities and for the decision, we must take in account the cost, quality, and taste of the client.’

Most of the concerns in this interview section were the loose power or control, either the team, scope or deliveries. They also have different strategies to deal with it. The group talked about communication, understanding and training. If the trouble is related to delivery times, they use strategies of negotiation and client involvement.

Q7. From the point of view of the designer, could you discuss if standardisation has an impact on creativity?

The ‘yes’ answers were from participants ‘a’, ‘c’, and ‘f’, and ‘no’ was ‘b’, ‘d’ and ‘e’. The explanation of the participants of ‘yes’ is because standards rigid the process of creativity, and ‘no’ argue that always is the opportunity to be creative in all relative to their jobs.

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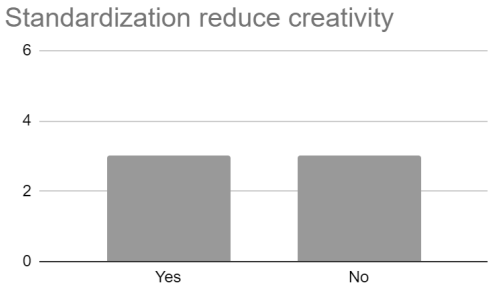
Q6	Keywords									
a	topics rigid	rules	limitations	spatial design	construction solutions					
b	gives order	creativity	structure	channeling ideas						
c	bespoke projects	different criteria	clients aspirations	standarise rigidise	need flexibility	creative proccess	agree with clients	requirements	client wants	prioritise ideas
	clients family	client's feedback	collaborative approach							
d	creativity continue	imagination	loose essence	creativity fundamental						
e	charachter	aligned standars	always creativity							
f	creativity needs freedom	processes constrain it	standarization	rigid phases						

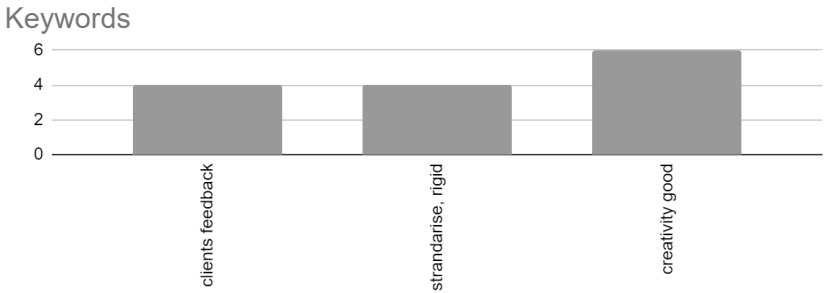
Table G, Q7

In this question, the findings have agreed there is a controversy among the participants in the question of if yes or not the standardisation reduces the creativity process. All the agreement says that creativity is a big part of the process. Another important subject is the client's feedback.



Graphic G1 and G2

Participant 'c' commented: 'Yes, a lot of what we do is bespoke projects with



Abbreviations
et. al_and others
PM _Project Manager

different criteria based on the client's aspirations. Now, to standardise, you are inputting it rigidly. The projects need the flexibility to be creative.'

Participant' d' commented: 'No, if yes, we have standards for creativity to continue. If the company does not have creativity, it may lose its essence. It is fundamental in this work.'

This part of the research is subjective to understanding the participant's world if the standards hold rigid the conceptualisation of the project itself.

Q8. In your opinion, which are critical factors for the failure or success of managing multi-projects?

Depending on the position and the character or the company, the participants' answer, control from participant 'a', communication from participant 'b', and participant 'c' argue that not to lose the momentum in the pace of the projects. Where participant 'd' is to try to do their best every day. Participant 'e' relates to planning, and finally, participant 'f' is about organisation and communication. Define expectations in the short, medium, and long term. Prioritising and understanding the risk and fortress of the project.'

Participant 'd' commented: 'Helping to have all the teams in constant training and looking for successful personnel and crew. Create developments in processes. Avoiding the loss of time. Spending time in groups always pays off well. All the participants, depending on their understanding of the business, answered different concerns about the failure of the projects. It is highlighted that the circumstances are about a part of the processes, like quality control, communication channels, delivery times, and control/organization. They are described as something that is in their management and expectations.

Abbreviations

et. al_and others
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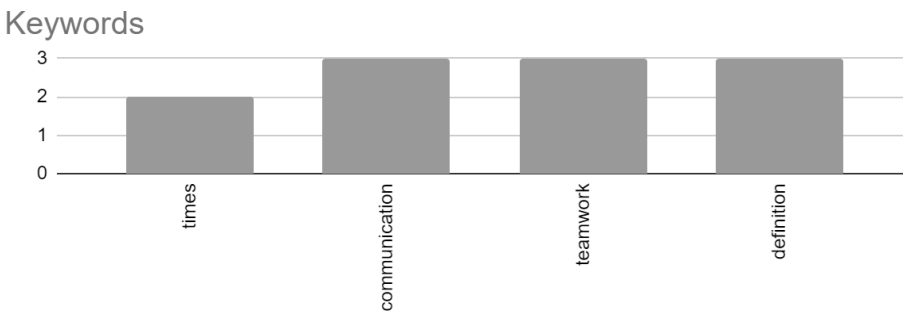
Q8	Keywords									
a	Control	where is the project	not ot forget tasks	timing control						
b	Communication	leadership	attitude	motivation	teamwork	define expectations	short	medium	long	term
	prioritasing	understanding	risks	fortress						
c	Momentum	Start	stop	project sttoped	uncertaities	inflation	could not afford	keep moving forward	communication	client
d	Excellence	every delivery	do the best	importance to the team	constant training	avoid loose time	spend time with the team			
e	Planning	defined scope	feasibility							
f	Organization	Communication	Desicion making	checking	processes					

Table H, Q8

Primary word	
a	Control
b	Communication
c	Momentum
d	Excellence
e	Planning
f	Organization



Participant 'b' commented: 'Communication is the key to leadership, attitude, motivation, and teamwork.

Table H1, Graphic H2

Abbreviations

et. al_and others
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Chapter 5: Discussion

The chapter related to Discussion in this dissertation will seek to have the finding from chapter four and about the research topic stated before. The research aims to strip the hypothesis of "How can project management and standardisation improve the multi-project working process in architectural organisations?". That was archived by an analysis of academic research using the tool of semi-structured interviews with experienced managers in the field of architecture. The headings of the organisation of this chapter are (i) Key Findings, (ii) Findings related to similar studies, (iii) Limitations of Study and (iv) Future research.

This part of the research presents the findings of the in-depth Interviews. The interviewees are all professional Project Managers working in the architecture industry with more than five years of experience working with multi projects.

Key Findings.

Theme 1: Project Management Plan and standardisation and its application to the projects and organisation.

> Project complexity (Sinha, Thomson, & Kumar, 2001), (Mikkelsen, M. F. 2020). Hamdi and Thomson 1999, relate to different topics such as difference, size, uniqueness, and others. In this case, the participants defined the scope and expertise that the team must have to work on the project's technical, sizing or the number of people involved. Complexity is described by Yugue & Maximiano 2012 as technological and ambiguous. Participants talked about their relationships with clients and the ambiguity of the client's solutions, and their understanding of the projects. Also, in operation, the complexity of one of the findings was the technicality of the solutions and how many specialists they had to involve in the solution.
>
> Multi-projects are a challenge regarding the processed and possible conflicts started by Ribchen C., Engel J., and Grantz J. 2018, Miloševic and Patanakul, 2002, Korhonen, Laine, Lyly-Yrjänäinen, & Suomala, 2016. Regarding the improvement of multi projects, the relevant findings are

Abbreviations

et. al_and others
PM _Project Manager

that complexity and size, teams and number of projects vary depending on the organisation's focus. More projects may be more organised within the company, and more standardisation processes are established. Hierarchy structures are similar from firm to firm, Miloševic and Patanakul, 2002 stated that the Project Manager must rely on the pool of resources. In this case, all rely on an internal team working closely with the client and consultants or subcontractors that specialise in engineers.

Organisational Management Project Management Institute. (2017) described a centralisation of processes, methods, and technologies. Despite that, our interviews speak of sectioning the processes intended for centralisation. Miloševic and Patanakul, 2002 say resource allocation, formal project selection, and prioritisation are the selection processes to follow.

Theme 2: Strategies of efficiency in multi-projects in architecture practices

Decision Making (Milosevic, 1997), (Szpiro, 2019). Optimal decision-making Sund, Robert and Huff, 2016 say that most consider evaluating problems, risks, constraints, and experience. This consideration is based on the focus of the project. The client's opinion is one of the main concerns of the participants. Then the participants mentioned the times, quality and scope used by the Project Manager. Budgeting of the project is of concern but not that mainly it is more about looking to minimise risks by attaching the client's involvement, who is the person that has the economic power.

To save time and efforts to automate are more dependent on different processes for every Project manager. (Dotsenko, Chumachenko, and Chumachenko, 2019) describe hierarchical and technical systems to reduce knowledge losses and build new competencies to minimise risks.

Abbreviations

et. al_and others
PM _Project Manager

Theme 3: Success and failure of the project

Where the multi-projects have found similarities between the overwhelming conflicts between the projects, Strategies of organisational management are based on Project Management Institute 2017, Daft. 2010, Graf., Seelhofer., 2018., (Dilawer, 2016) states that it shall orientate decisions to the company's culture and the control, system, technology, human resources, and policies. The research found that the decision is mainly based on budget, relevant to the stakeholders, employees and consultants. Overwhelming feelings arrive mostly when the PM has no control over the workloads.

Success and failure of projects are subjective depending on the person and goals of that project, and the finding is similar to this research stated by Pinto and Slevin (2015), Atkinson (1999), (Mikkelsen, 2020), (Lameijer, Jiju, Borgman & Linderman 2021). (Ribchenet. al., 2018, Discenza and Forman publish (2007). Creativity and the definition of success and failure of the project have different opinions depending on the target focus of the company

Findings related to similar studies.

Miloševic, D. & Patanakul, P. (2002). Secrets of successful multi-project managers. Described findings in which the Project Manager's expectation requires delivering a desired source of productivity, high customer satisfaction and current learning. The interviewees discussed the overwhelming feeling of control in different stages and the training necessary for the team and the customer involved in the processes that depend on the focus of the company managed and required. Lindner, R., Jaca, C. and Hernantes, J. (2021) 'A Good Practice for Integrating Stakeholders through Standardization. They described when the Project Managers are developing new standards. The main difficulties are primarily about choosing the appropriate culture in the firms. They also address different needs and the consensus that are not well discussed in the multi-project process. Also, it relates to the companies studied with other

Abbreviations
et. al_and others
PM _Project Manager

hierarchical structures that focus on the projects they choose and very different standardisation processes. Padraig, Friel (2021). 'Project Manager Perceptions of The Value Of Organisational Project Management is defined as the failure of projects. Key issues are a lack of understanding and recognition of the company's culture, experience, and inputs. The interview in this study relates to the importance of communication within the team, the training, and the communication with the people.

Limitations of Study.

Limitations of the research are that the same semi-structured interviews have low validity, which means comparing responses between the interviews can be challenging.

Conversely, the answers about what the person doing the interview wants to hear and the challenge to develop good semi-structured questions relevant to the research question. The projects and conditions of the participants are similar, the quantity and the complexity of the projects are very different, and the research question is answered subjectively within the perspective and the world of each Project manager. Although the participants have additional expertise in architectural practices in multi-projects and are at different levels of the hierarchy in their companies, the results in this research may vary.

The present research paper contributes to the literature regarding how Project managers in the industry of architecture deal with multi-projects, organisational management, failure and success of the projects and the requirements of standardisation.

Further research must study the level of implementation of standards within the firms and how standards affect creativity and focused strategies for areas in the industry. Methods more efficient to work within multi-projects and all the fitting for that purpose.

Abbreviations

et. al_and others
PM _Project Manager

Chapter 6 Conclusions and Recommendations

Conclusions.

The primary goal of this research is to prove the strategies of management that succeed while implementing standardisation, approaching it with the research question of “How can project management and standardisation improve the multi-project working process in architectural organisations?". The procedures and standards from an organisation of multi projects are essential to have absolute control of the information and quality of the deliveries. Project management in architecture works with multi-projects with different expectations for each project.

Literature review states the subjective areas at the time to talk about some subjects such as complexity, failure, and success of projects. Challenges as decision-making, strategies of organisational management. Where the analysis of the interviews gave the findings regarding current operations and processes that there is some of them agreed with the literature review on the subjectivity of the complexity definition. The organisational challenges of multi-projects. Finding on decision making, there were specific differences because despite the Project Managers considering different factors in that aspect, their base the decision on budgeting targets.

Regarding the level of standardisation in a company, the conclusion is that it depends on the focus of the company and the Projects that are dealing with; the minor bespoke project, the more standardised it can be. Despite that, all of them have implemented processes of documentation and approvals to follow the information with the clients and teams.

Tools to manage workloads are challenging to deal with, but we can conclude that every person is responsible for their part in either project. That is the person’s hands or sections of it, they are a team, and they must be confident that they can deal with their part of the process. In the case that too many projects are on, communication is the key.

Abbreviations

et. al_and others
PM _Project Manager

For decision-making, every Project Manager has a process based on the experience and milestones to follow. Saving time is a difficult task for all the Projects to be more profitable where their team is big, avoiding duplicity of tasks is essential and being ordered and focusing the resources where needed are the tasks that the Project Managers use.

Creativity and how it interacts with standardisation in my personal thought is that creativity is never thought away from the project while it is standardised. Architectural companies standardised were required to be more profitable and save time. Invention and creativity are tasks that must flow in the company to find solutions, and the team needs to be encouraged to be creative to find the correct answers.

Logistics, operations, and consultants are based on the number of simultaneous projects and their goals. Despite all the variables and the similarities between the participants, we can conclude that improving the multi-project working processes is a variable with the number of projects within the organisation. So, more projects are implemented with standards to control the information and better communication. The agreement between the researchers and the Implementation Project Managers is similar regarding the resources and requirements for using resources.

Failure and success of project definition depend on the objectives of such projects. It is more challenging when the Project Manager has simultaneous targets and scopes. So, the scopes and objectives in multi-projects need a more general definition going to the particulars. This means it can be the short-term definition of project by project. In the medium term would be the definition by month or year. And finally, the long-term objectives of the company. So, failure and success can be defined by the scope of each phase.

Any of the participants are working with a highly different strategy than the other companies, so it will mean that the strategies used are working, but we do not know how effectively until they try to change them.

Abbreviations

et. al_and others
PM _Project Manager

Recommendations.

This research was to find the effectiveness of implementing a Project Management Plan for standardisation in multi-projects in the Architectural field. Automatization and progressing developing processes should be implemented by the Project Managers working with multi-projects in the industry that possibly can be implemented in other sectors in simple models as per the companies required. That is based on the quantity of information that needs to be managed by this kind of project.

Based on the limitations of this study, the recommendation for future research:

(i) Conducting qualitative research should be continued study regarding the level of standardization that is better to have for companies focused and the requirements that need to have in each of the phases.

(ii) Resources allocation and effectiveness within the standardization in commented phases in multi projects.

(iii) An In-depth study with similarities of companies with similar scope and a similar range of projects will give more results.

(iv) The result of this study shows that project management is tools and values that agree with academic and different industries because they are the same values of failure and success of projects, organisational management, and others. So, it requires it to be studied in general and specific terms.

(v) Strategy change will be discussed to see if there is nothing more effective for the companies studied. In this part, it is required to have in mind the risk of changing strategies and the resources that they need to change them.

Abbreviations

et. al_and others
PM _Project Manager

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et. al_and others
PM _Project Manager

ANNEXE 1 Invitation Letter.

Standardization of Multi-projects in the Architecture Industry

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or if you would like more information. Take time to decide whether or not to take part.

WHO I AM AND WHAT THIS STUDY IS ABOUT? I am Nubia Vargas Esperon, I am currently studying for my master's degree in Management at the National College of Ireland. The research study will explore the gaps in implementation and knowledge related to standardising projects in the Architecture field.

WHAT WILL TAKING PART INVOLVE? The research in which Project Managers are invited to have In-depth interviews. Where they will describe the approach and research methods while designing projects of this kind. The Interview will last around 30 to 40min with around 10 questions as a script, the document will have complete anonymity for the participants.

DO YOU HAVE TO TAKE PART? The interview is completely voluntary, if there is a case the participant is not interested in the subject, the participant is free to say "NO" with no consequences for the research. It must be in response to the invitation.

WHAT ARE THE POSSIBLE BENEFITS OF TAKING PART? This research investigates the effectiveness of implementing a Project Management Plan for standardisation in Architectural projects. So, the benefits are that at the end of the dissertation, I will share the findings to improve your Project plan.

WILL TAKING PART BE CONFIDENTIAL? All the participants will sign a non-disclosure agreement at the participation. Where it describes the policies of privacy. According to the data retention policy as per the Research Ethics Committee website.

HOW WILL THE INFORMATION YOU PROVIDE BE RECORDED, STORED AND PROTECTED? The interview will be conducted with a participant that has experience in the design of public spaces and it will be recorded. It should be targeting the emotion in the users while speaking about their experiences in the design processes and the experiences of the people at the conclusion of it. Having a questionnaire in advance to revise the answers, will be a calendar of when the participant will have the interview. Prior to the consent of the interviewee signed on paper.

Abbreviations

et. al_and others
PM _Project Manager

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY? Following the strategies of tools, research, strategies, decision making, and workloads. The notes of the interview will be sent in prior to the participant agreeing if the information is concrete and attached to the interview.

WHO SHOULD YOU CONTACT FOR FURTHER INFORMATION?
Nubia Ixel Vargas Esperon
x20186851@student.ncirl.ie
+353 (0) 834770886
THANK YOU

Abbreviations

et. al_and others
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ANNEXE 2 Non-disclosure agreement.

This agreement dated this _____2022

Between Nubia Ixel Vargas Esperon, Research for Dissertation

Standardization of Multi-projects in Architecture Industry

MSC in Management

and (Name of the participant)

Agreement

Preparatory to, at, or arising from an Interview in 2022, the parties are prepared to disclose to each other certain technical information relating to their research activities, for the purpose of exploring the processes, tools, inputs and outputs while making the project this kind.

1. "Confidential information" shall mean any of the following, whether (i) disclosed by or on behalf of the Disclosing Party to the Receiving Party orally or recorded (ii) learned by the Receiving Party through observation or examination of any documents, plans, licences, contracts, books, data, software, source codes of the Disclosure Party (iii) or product through observation or examination of the Disclosure Party offices, processes and procedures or (iv) otherwise learned by the Receiving.

    a. Any information relating to the products or services of the Disclosing Party in which the Disclosing Party claims a proprietary and/or confidential interest.

    b. All the confidential matters of the Disclosing Party including without limitation technical know-how, design rights, trade secrets, technical data, analyses, compilation, concepts, formulas, specifications, inventions, research projects, customer lists, pricing policies, financial information actuarial information, marketing information, market opportunities and other business affairs of the Disclosing Party.

    c. Any information of a confidential nature concerning the Disclosing Party's customers, suppliers, employees, or consultants; and

    d. Any information the Disclosing Party has received from others which the Disclosing Party is obliged to treat as property and/or confidential.

Abbreviations

et. al_and others

PM _Project Manager

2. Confidentiality: since the information to be disclosed is confidential by each party, the disclosure to the other party shall be made on the basis that the Receiving Party shall maintain the Confidential Information received confidence and shall not without prior written consent the information can be disclosed.

Participant Nubia Ixel Vargas Esperon

Abbreviations

et. al_and others
PM _Project Manager

ANNEXE 3 Questionnaire.

Theme 1: Project Management Plan and standardisation and its application to the projects and organisation

Q1. How many projects do you have currently, and what is their complexity?

1a. 'Number of simultaneous projects at the time: 7. Scope: from searching points to completing the refurbishment, Conservation sites, Fit outs, and Reductions. It references the implication of the project depending on the client's requirements and financial scope. The projects are framed by the client's fine processes, manuals, and controls.'

1b. 'Number of simultaneous projects at the time: 40. Scope: Industrial buildings, Refrigeration areas, Sites, Retail, Refurbishments, New Buildings, Conservation and Fit-outs, Auditoria, and others. Complexity: 30% low complexity. Referred to the size and level of expertise the people need to work on.'

'Between 13 to 15 in different stages. Includes Fit-outs, Extensions, and refurbishments of habitational and conservation projects. Other complexities are higher for conservation and historical projects. Most of them are required and scope for complete services, and some just for a few stages.

1d '13 Projects, including 3 or 4 phases per project. Including retail, branches of banks and casinos. The complexity is measured by sqm. It can be between 50 sqm to 9000 sqm of construction. So, each of them is different.'

1e. '45 Projects between refurbishment, new openings, and moving. Some of them are an enormous scale of 12,000 sqm.'

1f. 'Two simultaneous projects with a complexity low in technical solution but always have internal processes that get more complexity to them like approvals from some parts of the company. Also, I have Facilities Management from the current open stores.'

Q2. Can you describe how a Project Management plan or standardisation has been implemented for your team?

2a. 'The standardisation process is divided into two parts. The first is the client's process, and the second is the internal process. Each has a process for doing queries of information, quotes, and reports. The deadlines and times for each step process are based on the times of repose of the people and approvals of the design and financial

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requirements. Also, license and construction Permits require 3 to 6 months to get through, so it can imply more time than is expected.'

2b. 'Yes, with Playbooks implemented in the projects, workflows and lifecycle of the projects are divided by phases of the processes and who is responsible for which task. At first, the projects are service level agreements where the scope, times, costs, and others are implemented. Every worker must know the processes. Therefore, they have manuals not only to have project standards but also, to fill formats and how to follow the process. So, when one worker arrived for the first time, they explained the procedures and gave them the manual. Also, all the processes are followed by databases where they fill all the projects. That gives them the graphics and tendencies of the process. Another critical point is the areas where they have more growth opportunities. Where they can typify and collect the type of risks and responsibilities and the type of risks. That gives a result the view of the areas to grow and where are the troubles in the project. All the formats are the same, and there are chats and groups to follow the information on time. All the people involved in the projects know their part in the project, roles and responsibilities, and communication channels. Defined milestones and the path of the project allow you to identify stoppers in the project. All the team must be trained and have skills of negotiation. '

2c. 'The procedures are set out by the RIAI statement; we have implemented Documents and Templates and recently implemented a process for the tender stage. The first stages are more challenging to manage an established process because they differ from all. We followed time frames as per the design agreed upon. We are implementing a set of documents for the design stages.'

2d. 'Work methodologies in the office follow from the start to the end with working groups and control processes. We are specialists in the development of projects. We define the project in goals which are order, presentation, and scope. We rely on the tools and abilities of the team in sequence, organised, and in a particular order. That allows the team to minimize mistakes without affecting the client's progress. Another critical area to work on is quality control, where we check all the parts and pieces of the project. We implement for every project standard of design where the client doesn't have means about the plan. We depend on the creativity of our people. Also, we ask for check-ups of the client that finish in our feedback. Checklists are implemented to archive scopes and Ok from the client.'

2e. 'We have two areas where the first includes programme, administration, and operation. Risks are generated in all the projects. And

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the second, in Latin America and Mexico, includes business, design, planning, execution and closures.'

2f. ``At this moment, I am developing and implementing the Project Management Plan and Standardization of surveys, tenders, approvals, pre-planning, planning, and tender, including the investment plan. But now, there are few solutions within the flows and requirements.'

Q3. How are teams formed? How are workloads distributed? What is the rationale for this?

3a. 'Internal Team has 68 people, (i) Account PM, (ii) PMs, (iii) Cost PM, Design PM, Documentation PM, (iv) 30 Contractors, 12 Designers-Divided by specialisation. Conservation, Fit-outs, Reductions, Openings, Mortgages, and others.'

3b. 'He has two teams in charge: retail and Costs. Whereas in Retail, 18 People for each project (depending on the project), (i) PMP, (ii) PM's Preconstruction, (iii) PM's Construction, (iv) PM's buyers, (v)Supervisors, (vi) Coordinators, (vii) Logistics, (viii) IT-Team Costs 12 People (a) PMP per area, (b) PMs per building, (c) PMs per industrial. He analyses the volume of the project and times. Most of the clients have defined the end. It is required to crumble into the number of people the project needs and when. More points mean the team becomes more efficient and profitable than smaller groups. Because in smaller units, the workers must diversify the tasks. Another variant is the volume of the projects per month, which is not the same. They usually start with very little quantity and growth. So, the number of people is increasing every month until the project reaches a point for the team's specialisation.'

3c. 'Internally, we are two people, but all the projects use external consultants, including structural engineers, quantity surveyors, energy consultants, landscaping, contractors, and others. We coordinate 3 or 4 per project. All of them must be included in the workloads and processes. Also, they have their workload. It is going to complicate the process. We use around 5 to 6 external consultants for complex projects like the one we have for conservation. Most of them are recommendations. For example, we have an Archaeologist that is recommended by the council. But we are the face of the client. We need to deliver reports following the client's requirements and regulations.'

3d. 'We have different external consultants: structural engineers, voice and data, surveyors, electrical engineers, and air conditioners. For the people inside, it is essential to do the profiling before the contract. We have a structure that includes PMs, the project leader, analysts, and a

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support team. We present to the client a structure as cooperative groups working on the project mostly to deal with loads of tasks. We also rely on the expertise of the people working inside and outside of the Organisation. So, we organise the work depending on the abilities of the people. Times are most of the time set by the client, so we need to define our logistics depending on it. We do a schedule where we estimate a reasonable workload for the people to deliver on time and with the quality required.'

3e. 'Internally are two directors, and in one of the projects are finances, systems, and supplies. On the other hand, we have PMs and subcontractors working on the projects.'

3f. ``We are the Inversions Director, I am Superintendent, Facilities Manager, and Project Management, and we have two architects working on each of the projects. But sometimes it depends on the size of the project with quantification and supervision and, I oversee Facilities where the facilities coordinator and the assistant.'

Theme 2: Strategies of efficiency in multi-projects in architecture practices

Q4. Do you have a process for decision-making? If so, how does it work? If not, how are decisions made and implemented?

4a.' Yes, where the financial part is the highest to make decisions, followed by the politics of the firm and client, and finally the times.'

4b. 'Yes, do not leave something to the memory; work on a list with one to four levels of details. The Important, the urgent and the important-urgent. Because not all are critical, and not all the essentials are crucial. Follow milestones, quality, and communication.'

4c. 'We use client minutes to record what has been said and want written confirmation from the client decision agreement. We follow decisions with builders on site; there is a consideration about the possible solutions to the problematics. Considering the opinion of our consultants and clients. That's how we make decisions.'

4d. 'Logistics and strategic planning in the management of projects. We need to be careful when we accept an assignment. Assess the complexity of the requirement if we have the time to do all the processes that require the excellent quality of the delivery—being honest with loads of the work. Also, very important not to affect the investment of the client or the team.'

4e. 'Yes, it is first who is going to the assigned project by evaluating the companies and consolidating budgeting. We have two technological and economical evaluations, which also influence their location.'

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4f. 'Yes, I must measure times in developing plans and construction, and the complexity and size set it, also depending on the scope, set the schedules for projects, facilities and the decision we must consider the client's cost, quality, and taste.'

Q5. Can you describe any efforts to automate, simplify or save time?

5a. 'Check the internal processes, remove duplicity of the methods, and do the procedures correctly. Add functions where there is none in place.'

5b. 'No procrastination, have clear objectives. Objectives must be measurable and feasible. Reminders and schedules are also important.

5c. 'We are looking to automate the design processes in 2 new projects. Templates and examples are also taken. But some things cannot be automated because we are an office of bespoke tailor solutions. We recently automated tenders. Having prepared documents is valuable to save time. But we manage commercial and residential, and they are very different from each other, speaking of the scope.'

5d. 'Ask for feedback, unify criteria, format the project, standardise the specialist, simplify information, follow the schedules, double-check information, and add new technologies to the evolution of tools.'

5e. 'We have different processes for the phases of the projects internally, mostly plus controls of budgeting, scheduling, evaluation, and with the subcontractors. We try to avoid deviations between costs and times. It depends on the profile of the project.'

5f. 'I have days set up for every part of my scope; there are days to solve problems related to projects, facilities, and administration.'

Theme 3: Success and failure of project

Q6. Does the amount and complexity of projects cause feelings of overwhelm, and if so, how do you deal with them?

6a. 'Yes, he must do it at the required times when he is not reaching the list. So, it means having a few administrative tasks on the side. That means prioritisation.'

6b. 'When clients do not know what they want, they start to ask for things that are not within their scope. When the team does not have the will to be in the group. When the work is more than the one that they deal with. And the team has not been more efficient. He deals with it by having a negotiation of the scope and doing a strategy of convincing, documentation and transparency. The team is more to choose the correct

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profile from before. He prefers a team with a great attitude than with lots of experience. If somebody in the group has problems, just talk about them, and try to solve them.'

6c. 'Having projects on hold commits resources. Also, there is a client that wants immediate responses. We explained that we focused the reactions on that or the other project, and they are ok with that. Also, I refused the assignment. I have a diagram for that; things are rejected if the presented project is not in 2 of 4. It is about how realistic the project is. Some clients have big aspirations but no budget. Also, if in the office we are busy enough, that is another thing. Another item is how attractive the project is.'

6d. 'I am a shield between the client and the practice. I am looking forward to adding projects. Prioritise simultaneous tasks, delegate responsibilities, and assess the organisational scheme. I deal with it with strategic planning with the different phases of the projects and say no to many deliveries. Only accept more work only if there are people available.'

6e. 'Yes, when the quantity of the projects is overwhelming, and there is no planning for many projects being delivered simultaneously. So, I deal with moving times and tasks by prioritising the budgeting and other areas in the company.'

6f. Yes, I feel overwhelmed when there is too much work and not enough time and no team; I started this work like that, but day after day, we are organising on the way.

Q7. From the point of view of the designer, could you discuss if standardisation has an impact on creativity?

7a. 'Yes, specific topics are rigid by the rules and limitations, but also, some issues allow his work to be creative, as in the spatial designs and construction solutions.'

7b. 'No, it gives order to creativity and structure. It is about channelling ideas.'

7c. 'Yes, a lot of what we do is bespoke projects with different criteria based on the clients' aspirations. Now, to standardise, you are inputting it rigidly. The projects need the flexibility to be creative. It might not deliver the same if we are more flexible. The creative process must agree with the client's requirements, establish what the client wants, and prioritise ideas, including how the client is with their family, pets, and kids. Also, ask for the client's feedback at the end of the project. We are looking for a collaborative approach.'

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7d. ‘No, if yes, we have standards for creativity to continue. If your company does not have imagination, you may lose its essence. It is fundamental in this work.’

7e. ‘In the end, some projects have character and are aligned to the standards, but there is always a part where creativity can be.’

7f. ‘Yes, because creativity needs freedom, all the tasks and processes constrain it. Standardization is made for three required phases: tender, quantification, administration, finances, and scope.

Q8. In your opinion, which are critical factors for the failure or success of managing multi-projects?

8a. ‘Control, to know where you are in the project all the time, to forget tasks, and control the times.’

8b. ‘Communication is the key to leadership, attitude, motivation, and teamwork. Define expectations in the short, medium, and long term. Prioritising and understanding the risk and fortress of the project.’

8c. ‘Momentum. Start and stop, back the pandemic happened that some projects stopped because of the uncertainties and inflation and in the end; they could not afford the entire project that we had worked on before. The project must keep moving forward. Having a successful project, I think, depends on communication; the client works so hard to have the resources for their project that it must be very involved in it.’

8d. ‘Success is excellence in every delivery. We try to do our best in every part of the company and lower that culture to the teams because we do not work alone. We look down on the level of mistakes. It helps to have all the teams in constant training and looking for successful personnel and crew. Create developments in processes. Avoiding the loss of time. Spending time in groups always pays off in a good sense.’

8e. ‘In planning, there are a lot of times when the projects have no defined scope, and there are changes that can affect the budgeting and cannot be feasible. So planning is the key.’

8f. ‘Organization, communication, and arriving at solutions in decision making, checking all the parts and processes before the delivery.’

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