

Study And Analysis of Stakeholder Management Factors And Its Influence on Project Performance In Construction Industry

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Abstract- Interest in stakeholders has grown considerably since Freeman's (1984) seminal work "Strategic Management: A Stakeholder Approach" was published. The interactions and interrelationships between stakeholders largely determine the overall performance of a construction project, and have the crucial responsibility for delivering a project to successful completion. An important component of stakeholder management is stakeholder analysis. Two case studies are conducted in Southern part of Tamil Nadu (India). The main objective was to carry out stakeholder analysis using Microsoft Excel, considering the data's collected from the project execution team using questionnaire. During data collection the key stakeholders were identified, to know how to manage them, their interest, power, attitude level etc, for quality improvement. Analyse the results using the software Microsoft Excel and modelling of stakeholders is to be done. Finally validate the models of the projects. These findings may mainly reflect the stakeholder management environment in the respective regions of project implementation.

Keywords- Stakeholders, identification, prioritization, power, interest and attitude level, validation

I. INTRODUCTION

A project is a transitory undertaking attempted by individuals who work helpfully together to create a unique product or service. For Economic growth of any nation construction projects plays vital role by assisting the delivery important public services, firms to economic opportunities, connects citizens and serving as a vital fuel. Pune is the ninth most populous city in India and the second-largest city after Mumbai in Maharashtra. Pune is also the 101st most significant city in the world by population. It is considered the cultural capital of Maharashtra. Pune is also one of the fastest-growing cities in the Asia-Pacific region. Various projects are going on in and around Pune city, including the most impressive Metro Rail projects. Pune has also been chosen for the smart city project by the government of India.

These companies have done a great job by developing the many projects in the Pune region in the last two decades. Arwade Infrastructure Limited One of the best infrastructure companies in Pune.

Some of these construction companies are the most emerging companies in India. They have expertise in constructing Roads, Dams, Bridges, and industrial projects. Few of them are also active in residential and commercial building projects.

The primary criteria for the success of a construction project are the budgeted cost, the planned timeline, the intended quality, and customer satisfaction. Construction projects must be finished within these four limitations. "Project success is contingent on schedule, money, and deliverables" A range of people or organisations, known as project stakeholders, contribute directly to the success of construction projects. For the effective management of a building project, accountable managers must analyse the likely effects of all stakeholders engaged. Appropriate manoeuvring may be designed and implemented to maximise a beneficial effect of stakeholders and minimise any negative influence. This turns out to be a substantial risk management problem. In building projects, if stakeholder management is not conducted appropriately, it might result in major complications. Some reasons that contribute to bad stakeholder management include unclear scope and task, incorrect resource allocations, a lack of communication, modifications to the established scope, and unanticipated changes.

This is the sole major cause of building project cost overruns and delays. Doloji (2011) noted that due to the multidimensional character of building projects, the input of a large number of stakeholders with distinct interests rises. Which generates the cost overrun issue. Identification of stakeholders, identification of their needs and expectations, and management of their impact are essential to the success of a project (Othman & Abdel latif 2011). The number and kind of stakeholders will change over the course of the project's

duration; consequently, it makes sense to conduct an ongoing evaluation of identification (Moodley 2002). Therefore, the management process should be undertaken so that the public and society work together as a team to accomplish the project or programme. As a result, it is a self-sufficient and self-management process in which individual engagement empowers the public and society via gained skills, knowledge, and experience.

1.1 Stakeholder theory

In 1984, R. Edward Freeman originally detailed the Stakeholder Theory of organizational management and business ethics that addresses morals and values in managing an organization. His award-winning book *Strategic Management: A Stakeholder Approach* identifies and models the groups which are stakeholders of a corporation, and both describes and recommends methods by which management can give due regard to the interests of those groups.

The theory has become a key consideration in the study of business ethics and has served as a platform for further study and development in the research and published work of many scholars, including those featured on this website.

Since the 1980s, there has been a substantial rise in the theory's prominence, with scholars around the world continuing to question the sustainability of focusing on shareholders' wealth as the most fundamental objective of business.

We aim to be the hub of leading stakeholder research and thinking by providing resources to new scholars, students, and business leaders.



Fig.1.1 Stakeholder Theory

Significance of Study

1. While working with different stakeholders during the entire project management process, these work can be useful to various practitioners in construction field.
2. The work will be helpful for existing and upcoming management of stakeholders in construction fields for Pune and can equally be significant to all other regional construction companies/ organizations.
3. Basic references for other researchers to further study is provided by this study and come out with some input factors for managing stakeholders involved in construction projects.
4. The primary merits of the study go to the academics.

II. LITERATURE REVIEW

Stefan Olande ,et.al (2008) Conducted study on , “A comparative study of factors affecting the external stakeholder management process” This tends to result in project managers being unprepared for the conflicts that can arise, and thus having no plan of how to handle or resolve them. The implementation of TQM values, principles and procedures could yield many benefits, including more satisfied stakeholders. The satisfaction of stakeholders is the key variable; however, other variables can be tracked on individual projects to provide valuable feedback. Although the team for each project must select the appropriate variables carefully, there are 560 Olander and Landin Downloaded by [University of California Santa Cruz] at 11:41 08 October 2014 several general measurements that can be used to measure the overall impact (Landin, 2000). For sufficient performance of a stakeholder management process, there needs to be an understanding of the complexity of stakeholder influences. The impact of stakeholders' changes throughout the life of the project depends largely on the perceptions stakeholders have of the project. The conflict that was observed was due mainly to miscommunication and to the mismanagement of the impacts and concerns of stakeholders. Project managers should acknowledge the stakeholder management process as an important activity for which adequate resources should be committed. One objective of this process should be to communicate the various aspects of a project correctly, be they good or bad. The challenge for project managers is then to implement the project in such a way that the effects of negative impacts are minimized and, if possible, the benefits for all affected stakeholders are maximized. They must communicate and interact with stakeholders so that the perceived benefits and the negative impacts are realistically defined.

Jing Yang, et.al (2009) Conducted study on, “PRACTICE BRIEFING An overview of previous studies in stakeholder management and its implications for the construction industry” This paper provides a critical review of previous studies in the field of stakeholder management, and suggests two implications for the construction industry. It reveals that a large number of researchers have paid increasing attentions to the topic of stakeholder management in recent years. The number of papers in the descriptive approach increased significantly in the last two years. Stakeholder management process has centralised on identifying project stakeholders and analysing the different types of stakeholders’ relationships. Project managers should identify stakeholder boundaries, balance the interests of the entire stakeholder set, accommodate their conflicts and interests, and detect how a stakeholder is influenced by other stakeholders. The weaknesses of previous studies on stakeholder management can be traced back to three main problems, namely:

- (1) very few methods and tools are available to identify stakeholders and their interests;
- (2) limited studies can address changes in project stakeholders’ influence and relationship; and
- (3) few studies are capable of reflecting the influence of the entire relationship network in practice. In terms of the implications in the field of stakeholder management for the construction industry, it is suggested that a practical framework for managing stakeholders be developed, and the SNT be used to identify and analyse the relationship and the implication behind these relationship network in complex construction projects. This perspective avoids the deficiency of Freeman’s dyadic ties model, and the project managers can make decisions in response to the stakeholder behaviours according to the entire relationship.

AyirebiDansoh, et.al (2017) Conducted study on, “A review of stakeholder management performance attributes in construction projects” Construction stakeholder management (SM) engages a lot of attention in project management research domain and industry. This is because construction SM has attained poor industrial feat in the past decades. Hitherto, there is lack of an elaborative tool to manage SM performance in construction projects. Hence, this review fills the gap by presenting a conceptual model of SM performance attributes comprising performance objectives (POs), success factors (SFs) and performance indicators (PIs) that could be engaged to manage (i.e. benchmark, enhance, monitor, and measure) the performance of construction SM. The outcome will benefit professionals and researchers due to the flexibility of selecting a number of attributes that fit the nature, type and stage of projects in order to ensure effective management. It therefore provides a better means of measuring project success

in the industry by objectively and subjectively evaluating the level of stakeholder and organisational satisfaction in construction project delivery.

N.P. Srinivasan, et.al (2019) Conducted study on, “An empirical study on stakeholder management in construction projects” The intent of this study is to analyze the various factors governing stakeholder management in construction projects. In general, the construction companies involving in major infrastructure projects mostly tend to have a number of stakeholders. In such situations, managing the stakeholders and getting adequate support from them becomes necessary. Therefore this paper made an empirical study on their management through questionnaire survey taken among various engineering and managerial personnel (Project managers). This study identified the major factors influencing stakeholder management in construction projects and analyzed them using Principal Component Analysis and Mean Score analysis by frequency distribution method.

Geoffrey Qiping Shen, et.al (2010) Conducted study on, “Stakeholder management in construction: An empirical study to address research gaps in previous studies” This paper concentrates on identifying gaps in the scope of previous studies on stakeholder management, and starting to address those gaps by conducting an empirical study. To complete these research objectives, literature review, interviews, questionnaire survey, and a case study were used in this study. Four gaps regarding critical success factors, stakeholder management process, methods for stakeholder management and stakeholder relationship management were identified. Based on an empirical study, a framework for effective stakeholder management is proposed, and the application of a Social Network Analysis technique, as a means of determining the influence of stakeholders on decision making, is illustrated and validated by a case study. These findings can serve as initial references towards a more systematic approach for stakeholder management. Since the empirical study was conducted only in Hong Kong and Australia, further studies should be conducted in other regions to validate and compare with the finding in this paper. © 2010 Elsevier Ltd. and IPMA. All rights reserved.

Nabil Ibrahim El-Sawalhi, et.al (2015) Conducted study on, “Factors affecting stakeholder management in construction projects in the Gaza Strip” The study concludes that the role of the project manager who has high competencies, experience and good communication skills is essential to the successful relationship management of stakeholder and will contribute to the good performance of the project. Furthermore, it is vital to the project’s success to consider stakeholder concerns and needs. It is very important to consider the information input

concerning setting common goals for the project and meeting the stakeholders' needs and expectations. The main contribution of this paper is that the findings could be used as an evaluation mechanism for stakeholder management and further proposals for improvements. The results of this paper are based on a questionnaire survey, which is bounded by the respondents' understandings about stakeholder management. Therefore, the findings in this paper should be further validated by other means such as interviews and case studies. As the questionnaire survey was conducted locally in Gaza Strip, the output of the research may not be generalized to the other geographical locations.

Joseph Ignatius TeyeBuerthey, et.al (2016) Conducted study on, "Stakeholder Management on Construction Projects: A Key Indicator for Project Success" The purpose of this study was to determine the barriers to stakeholder involvement in developmental projects at the grassroots level and examine the impact of stakeholder involvement on the success of projects implemented. Data was gathered through structured questionnaires distributed to ordinary citizens, community leaders and local authority staff in selected district assemblies in Ghana. Analysis of structured questionnaires revealed that there was inadequate explanation of the background, technical and material justification for the project to the stakeholders prior to project initiation. Stakeholders held that they had difficulty in participating in technical discussions and there was the perceived unwillingness of project implementers to involve them during decision making, to this end, the impact of stakeholders towards project success was significant. To overcome the challenge of stakeholder involvement and meaningful impact to projects, stakeholders must develop capacities to contribute meaningfully in discussions or delegate their concerns to professional representatives. To this end, projects implementers must acknowledge the value of stakeholders and embark on stakeholder outreach to solicit their involvement for enhanced project success.

Abdul Saad,et.al, (2020) Conducted study on, "Role of awareness in strengthening the relationship between stakeholder management and project success in the construction industry of Pakistan" This study aimed to measure the impact of stakeholder management on project success moderated by the awareness of stakeholder management. The study model has been quantitatively evaluated by collecting data from 300 respondents who belong to some of the major private and government construction firms of Pakistan. Structural equation modelling (SEM) has been applied using Smart PLS software after which it has been concluded that the stakeholder management positively impacts the project success and also affirms the positive moderation of awareness. The study Statistically (though SEM) concludes

that on increasing stakeholder management's Awareness of Project teams there is a positive effect on the relationship between Stakeholder management approach and project success. This result is in-line with the literature discussed in this study, which suggest that to increase the chances of project success in projects, better stakeholder management approach is required.

Ka Yan Mok, et.al (2014) Conducted study on, "Stakeholder management studies in mega construction projects: A review and future directions" This paper analyzes the latest research development of this domain by reviewing selected articles published from 1997 to 2014. Four major research topics are identified: "stakeholder interests and influences", "stakeholder management process", "stakeholder analysis methods" and "stakeholder engagement". This study reveals that SM approaches in MCP are subject to national context of the project, indicating a need to identify the impact of national culture on this discipline. Moreover, traditional stakeholder analysis techniques are widely adopted in MCP notwithstanding their weaknesses; therefore a social network approach for managing stakeholder interrelationships in these projects is needed.

Nathaniel AyindeOlatunde, et.al (2020) Conducted study on , "Factors Influencing Stakeholder Management in Building Projects Procured by Private Corporate Organisations" The objective of the reported study is to assess the factors influencing SM in building projects procured by private corporate organizations in Southwestern Nigeria with a view to enhancing project delivery. The data for the study were collected using a structured questionnaire survey. Purposive sampling technique was used to select project managers (PMs) and client representatives (CRs) that were involved in the management of building projects procured by private corporate organizations between 2008 and 2017. A total of 106 questionnaires were received from PMs and CRs that responded to the questionnaire survey. The data collected were analysed using mean score (MS) analysis, Student's t-test and factor analysis. The result shows that the most important factors influencing SM comprise of 'maintaining good relationships with stakeholders', 'addressing stakeholders' concerns and needs' and 'avenue for communicating project impacts'. The further result using factor analysis shows that the factors influencing SM could be categorized into six component groupings of - project relationship, information input, stakeholder estimation, decision-making, sustainable support and external project relationship awareness. The study concluded that project managers need to pay attention to the identified topranking factors in order to achieve improved project delivery.

2.1 Stakeholder Definition

In 1963 The Stanford Research Institute firstly brought The stakeholder concept into the management sector (KaYanMok).The term's takeholder' is stated as'a body, a particular who is able to influence or is got influenced through the attainments of the project's goals'. The most common definition is given by

Project Management Body of Knowledge (PMBOK). It states that an individual, party, or association who can disturb, be disturbed by, or identify it self to be affected helpfully or harmfully by a decision, activity, or project outcome (PMI, 2013). Concentrating on their impact (Bourne and Walker, 2006) state that stakeholders are "any individual or party with an enthusiasm for the result of the undertaking or potentially a capacity to apply impact".

The number of possible stakeholders can change as the broadness of project stakeholder's definition ends up with change. Hence, different authors provide a list of the different stakeholders in project. Some of the most representative stakeholders involving inbuilding endeavors is illustrated in Figure. A list of the most common stakeholders inproject.Inconstructionindustrystakeholdersincorporatehowev ernotrestrictedtoproprietors and clients of offices but rather the undertaking directors, offices supervisors,contractors,sub-contractualworkers,suppliers,serviceproviders,designers,share holders,competitors, banks, legal authorities, media, general public, government establishments, visitors, community representatives, neighbors, clients, territorial improvement offices, the common habitat, the press, pressure groups, insurance companies, civic institutions are also included in stakeholders of project. The quantity of stakeholders included or intrigued in the project can altogether changes the circumstance of vulnerability and complexity. Every one of these stakeholders, anybody would impact the course of a task at some stage.

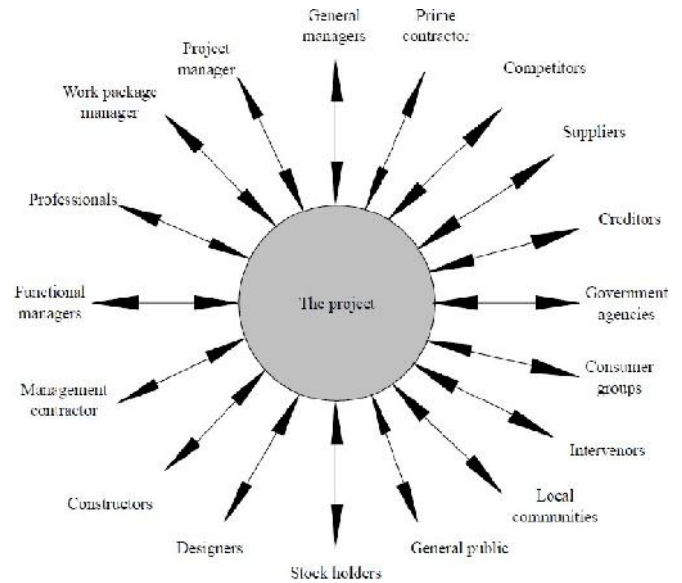


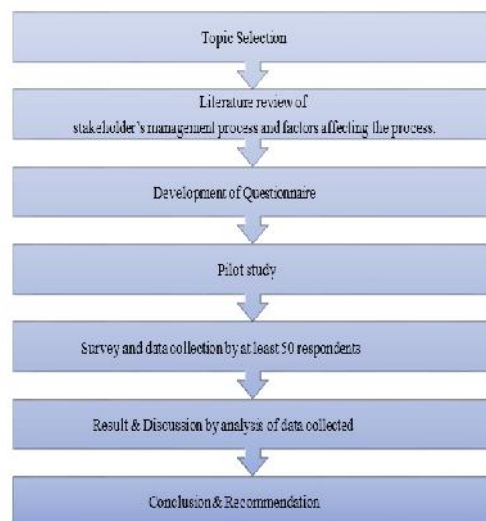
Figure 2.1 Different projects takeholders (Yangetal.,2009)

III. RESEARCH METHODOLOGY

This chapter gives fundamental thought regarding adopted methodology to complete this examination. Quickly it comprises data about the research strategy and its structure, sampling for research, the procedure of data collection and its analysis. After a complete review of literature and after getting list of input factors the research work in terms of questionnaire survey was conducted.

The flowchart will give idea about methods adopted for this research:

Table 3.1 Methodology Chart



Sampling MethodandSample size

The individuals targeted in this research work includes the experts, project managers, general managers, project co-ordinators or those possessing knowledge as well as experience in handling stakeholder management of construction projects. “Choosing an individual from a large group such that the selected individual illustrate that group” this process called as Sampling.

Probability and non-probability sampling this are the two major types of sampling. At the point when a sample in populace have some known chance of being chosen then it’s called probability sampling and when sample does not have predetermined possibility of being chosen is called non-probability sampling. Non probability sampling further classified as of convenience sampling & purposive sampling. When data is gathered from conveniently accessible samples the it is a convenience sampling and that of generated from a particular targeted samples then it’s termed as purposive sampling. Since the targeted population is small, Non-probability sampling is selected. Also the selection of the practitioners was arbitrary. Target population was fixed with respect to the types of stakeholder’s viz.contractor, client, and consultant. Sample size expected to be between 50-70, Minimum 50 responses from them is kept as target.

Method of data collection

Method of collecting data in this research was performed using questionnaire. In order to reveal the opinions,facts and views for descriptive and analytical surveys questionnaire have been used (Naoum, 2007). The type of survey chosen for this study is the interview of construction practitioners and web-based survey mainly carried out by sending the questionnaire through the emails.

A survey is liked, as it gives preferences, for example, quick turnaround in information gathering and distinguishes attributes of a large population from a small group of people.The study is cross-sectional, where the information is gathered one point at the time. The sort of review picked for this research is the interview of construction practitioners and web-based survey mainly carried out by sending the questionnaire through the emails. There are a few purposes behind picking a web-based survey:

- Time required for survey implementation can be reduced.
- It enhances confidentiality.

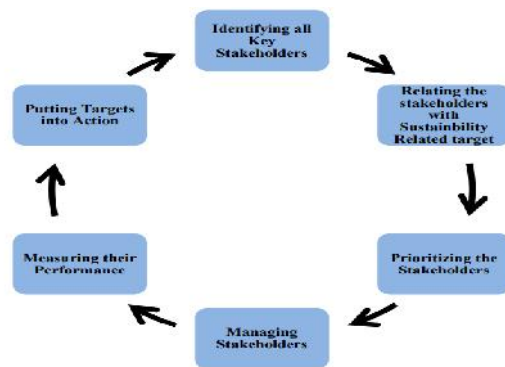
Data from web-based surveys can simply be transferred for statistical data analysis.

The utilized questionnaire has a few restrictions, for example, it must contain basic inquiries, no control over respondents. (Naoum, 2007).

In this research “Importance Scale” is used. Likert scale were used to assess respondents’ view points to a particular question. A point system from 1 to 5 was assigned where “Not Important -1” on one end to “Very Important-5” on the other end with “Moderately Important 3” in the middle was generated. Respondents were allowed to put the importance level between1-5.

Findings and Discussion

This section presents a summary of the interview findings, with brief discussion, in relation to the interviewees’ attitudes and experiences related to the processes for engaging with stakeholders. Processes for engaging with stakeholders In terms of engaging with stakeholders the interview findings suggests a systematic process involving six key steps—as shown in Figure 2



Purpose of study

The purpose of the research is to assess the input factors influencing management of stakeholder and their effect on performance of construction schemes in Pune city.

Objectives

- To investigate the current practice of Stakeholder Management within construction industry.
- To find critical success factors having impact on 'Stakeholder Management'.
- To form gradation of factors having impact on Management of Stakeholder in construction of Pune region, (Maharashtra, India).
- Relating Stakeholder Management factors an project performance through correlation analysis method in terms of Cost, Time and Quality.

Scope of Project

The scope of this research is to study the critical success factors which put impact on project stakeholder management which ultimately affects project outcomes. This study focuses on companies/organizations of Pune city including building construction and civil infrastructure construction. The focus is additionally set on the number of stakeholders’ management system actualized in firms identified with construction projects.

IV. RESULTS AND DISCUSSIONS

Nature of Company/Organization

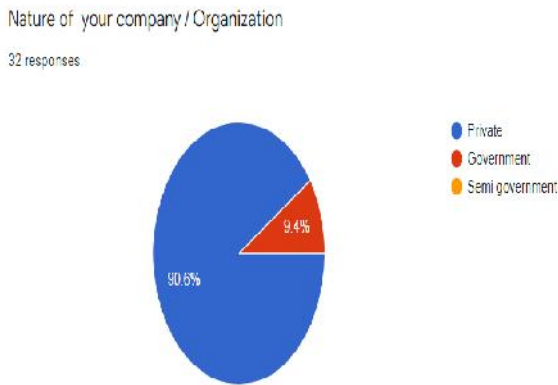


Figure 4.1 Nature of respondents’ company

Type of Company/Organization

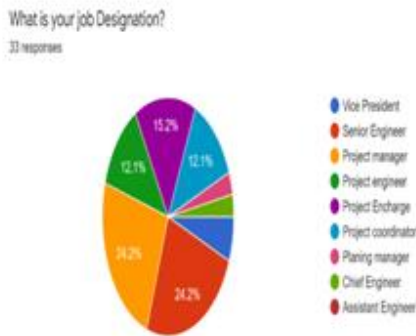


Fig. Distribution of projects’ type

Job Designation and Experience

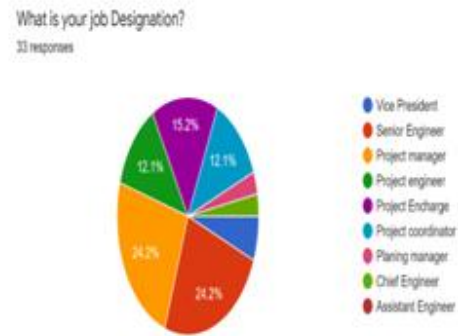


Figure 4.4 Distribution of respondent

V. CONCLUSIONS AND RECOMMENDATIONS

This research stressed the need of addressing stakeholder management while planning and implementing building projects. The goal was to assess the most prevalent elements influencing stakeholder management in building projects in. The research suggests many aspects that influence stakeholder management. A total of six dimensions of elements influencing the stakeholder management process were synthesised: decision making, information intake, management support, action and evaluation, on-going support, and stakeholder assessment.

This study conducts a critical analysis of past studies in the subject of stakeholder management and makes two recommendations for the construction industry. It demonstrates that in recent years, a huge number of scholars have devoted growing attention to the roblem of stakeholder management. The descriptive technique has seen a huge rise in the number of articles published in the previous two years. The project stakeholder management approach has been centred on identifying project stakeholders and analysing the various forms of stakeholder interactions. Project managers must establish stakeholder boundaries, balance the interests of the full stakeholder set, accommodate conflicts and interests, and determine how one stakeholder is impacted by anotherIn terms of the implications for the construction industry in the field of stakeholder management, it is suggested that a practical framework for managing stakeholders be developed, and that the Performing specific functions be used to identify and analyse the relationship and implications behind these relationship networks in complex construction projects. This viewpoint avoids the flaws of Freeman's dyadic connections model, and project managers may make judgments based on stakeholder behaviours throughout the whole relationship.

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