

# Identification of OSH Stakeholder Engagement Management Strategy at XYZ University Area Based on the Results of Mapping for Each Quadrant

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Abstract. Based on Government Regulation of Indonesia no. 50 of 2012, every company has to implement OSH management system. XYZ University, as a university with lots of students, lecturers, and staffs, also needs to implement OSH management. OSHE organizations show the implementation of OSHE management at XYZ University. 102 stakeholders involved in OSHE management implementations. But there are several problems, such as internal and external issues, the number of incidents that have not been decreasing for years, and some OSHE management indicators that have not met the targets. This study aims to improve the performance of OSHE organizations at the XYZ University by identifying the power and interest of each stakeholder, visualizing them using the power and interest grid, and arranging the strategies for each stakeholder. The novelty of this research is the OSHE stakeholder at the XYZ University and making strategies for each stakeholder. This research is limited to OSHE stakeholder management at XYZ University. This research methods are literature study, expert validation, and survey. The analysis methods are statistics analysis and stakeholder analysis. The output of this research is the recommendation of OSHE stakeholder engagement strategy at the XYZ University during the construction process.

Keywords: Stakeholder engagement  $\cdot$  OSH  $\cdot$  HSE  $\cdot$  Construction  $\cdot$  Strategy  $\cdot$  Management

## 1 Introduction

The construction project is an activity to achieve a specific goal with some limitations, such as cost, time, and quality. The purpose of the project is to build and maintain a building [1]. But one industry sector with a high fatality risk is the construction industry [2]. The construction industry often gets criticized for its high fatality risk [3]. But the construction industry is necessary to build public infrastructure [4]. As for a university, the construction industry is needed to make the campus infrastructure and facilities.

Government Regulation of Indonesia no. 50 of 2012 about the Implementation of Occupational Safety and Health Management System, from now on referred to as OSHMS, said that OSHMS is a part of enterprise's comprehensive management system that is pertaining to occupational activity in order to create safe, efficient, and productive work. The implementation of OSHMS aims to increase the effectiveness of safety and work health protection. Government Regulation of the Republic of Indonesia number 50 of 2012 also said that every enterprise has to implement OSHMS.

XYZ University, which is one of the universities in Indonesia, has been implementing Occupational Safety, Health, and Environment Management System (OSHEMS). XYZ University itself is a hypothetical university. Based on the interview with the Occupational, Safety, Health, and Environment Organization at XYZ University, the implementation of OSHEMS in XYZ University is shown by the presence of some organizations that manage and give some advice about the implementation of OSHEMS. They also stated that there are 18 organizations with 102 stakeholders who are involved in the implementation of OSHEMS. Those 102 stakeholders are divided into 87 internal and 15 external stakeholders. Those stakeholders must be managed well and efficiently so that OSHE implementation can be done well. Stakeholder engagement management is a process of getting and analyzing the needs, interests, concerns, expectations, and problems of each stakeholder to keep stakeholders involved so that the support of each stakeholder can be increased [5].

However, several problems happen in the implementation of OSHEMS in XYZ University. There are some internal and external issues caused by stakeholder management that can decrease organizational performance. The problems are the workers' participation, the leaders' support, and the workers' job satisfaction. Besides that, there are some requirements based on Government Regulation no. 50 of 2012 and ISO 45001:2018 that have not met the target yet, such as understanding the organization and its contexts, understanding the needs and expectations of the workers and others, and engagement and consultations for the workers. Those problems can decrease organizational performance [5].

Furthermore, there are also some problems during the construction process. Based on the interview with OHSE Organization at XYZ University, there are several problems in controlling the contractor. Moreover, the stakeholders involved in the construction process at XYZ University have not been identified yet. As a result, there is no data about work accidents in XYZ University caused by construction process.

One of the causes of those problems is the lack of stakeholder engagement management in implementing OSHEMS at XYZ University during the construction process. This can have some negative impacts, such as the workers ignoring to implement OSHE, lack of incident prevention and response, and organizational management that does not run well so that organizational performance can decrease. Therefore, the development of strategies for managing the involvement of OSHEMS stakeholders at XYZ University is needed to improve organizational performance.

The object of this research is the management of OSHEMS stakeholder engagement in XYZ University during the construction process that can produce a product in the form of OSHEMS stakeholder engagement strategies at the XYZ University campus area during the construction process. This is a novelty of the research where there is no research yet about OSHEMS stakeholder management during XYZ University's construction process. The research location is also one of the novelty elements of this research, which is at the XYZ University campus area.

#### 2 Literature Review

The Occupational, Health, and Safety Management System, known as OSHMS, is a management system to prevent and resolve all possible risks. OSHMS aims to reduce workplace accidents and make a safe and healthy work environment to increase workers' productivity [6]. OSHMS has positive impacts, such as fewer casualties after implementing OSHMS [7].

XYZ University has implemented the Occupational, Safety, Health, and Environment Management System or OSHEMS. But from the interview with OSHE organization at XYZ University, some faculties have not implemented OSHEMS yet. It shows that the OSHEMS implementation has not been done well. Some stakeholders are involved in the implementation of OSHEMS. Stakeholders are the groups or individuals who can impact or affect the organization's goal [8]. Stakeholders are the parties actively involved in the project, and their interests can be affected positively or negatively by the project's performance [5].

Stakeholders' engagement can lead the project to its success or failure. Stakeholder management is needed to manage stakeholder engagement so the project can succeed. Stakeholder management is a process of identifying the parties that can affect or be affected by the project, analyzing the expectations and impacts from each stakeholder, and developing strategies to effectively involve every stakeholder in the project [5]. Stakeholders should be managed continuously to ensure that the needs and expectations of each stakeholder are already fulfilled [9].

Based on PMBOK's sixth edition, there are four stakeholder management processes, which are stakeholder identification, plan stakeholder engagement, manage stakeholder engagement, and monitor stakeholder engagement. The first step is stakeholder identification. Stakeholder identification is a process of identifying and analyzing information about stakeholders [5]. One of the tools that can be used in this process is the power and interest grid.

Power and interest grids can be used in managing the stakeholder based on their categorization [10]. The power and interest grid divide stakeholders into four categories. Stakeholders with high power and interest level are the Manage Closely. Manage Closely stakeholders are the ones who can influence the project significantly. Stakeholders with high power levels but low-interest levels are Keep Satisfied. Keep Satisfied stakeholders have the authority to make decisions but do not involve actively. Stakeholders with low power levels but high-interest levels are Keep Informed. They involve actively and can be affected by the project but do not have the authority, so they have low influence. Stakeholders with low power and interest level are the Monitor. They can involve passively in the project and do not have some impact [11].

#### 3 Methodology

Research is a way to get answers of the research question objectively. Proper research procedure is needed in doing some research. The research procedure used in identifying and analyzing information related to research questions is a research methodology [12]. Research methodology is a way to get data in achieving a certain goal [13].

A proper and systematic research stages is needed in doing a research so that research can run well. The research stages are the steps taken by the author to achieve the research goals. Figure 1 is a flow chart of this research.

The research instruments used are initial expert validation, pilot survey, survey respondents, and final expert validation. This research starts by collecting data and information by doing literature research. The literature research results are validated by five experts with a minimum of 10 years of experience. This process is called initial expert validation. After that, it was followed by a pilot survey, which needed five respondents, and continued to the respondent survey, which required a minimum of 20 respondents. Those respondents must have a minimum of 5 years of experience. The data from the surveys are analyzed using statistical analysis and stakeholder analysis. The results of this study are validated by the experts who did the initial expert validation. Statistical analysis that are used in processing the data from survey respondents are data adequacy test, homogeneity test, validity test, reliability test, and descriptive test. The statistical tests use SPSS and Microsoft Excel applications. The data adequacy test is carried out using Microsoft Excel with the following formula:

11. [

$$N' = \left(\frac{\frac{\hbar}{s}\sqrt{N\Sigma xi^2 - (\Sigma xi)^2}}{\Sigma Xi}\right) \tag{1}$$

-2 2



Fig. 1. Research flow chart

N: the amounts of the calculations that has been done N': the amounts of the calculation that are needed k: level of confidence, if the confidence level is 95%, the k value is 2. If the confidence level 99%, the k value is 3 s: level of precision (1–10%) Xi: the i<sup>th</sup> data

If N' value < N value, the data is adequate. But, if N'  $\geq$  N, the data is not adequate. A homogeneity test is used to know if the data is homogenous or not [14]. The homogeneity test uses SPSS with a nonparametric K-Independent Test. The data is homogenous if the significance value is less than 0,05 (sig < 0,05). The validity test determines whether the measured variable is the variable the researcher wants to measure for their research [15]. The validity test uses SPSS with a bivariate correlation test. The variables are valid if the r value exceeds the r table. A reliability test is used to determine whether the questionnaire is reliable [16]. The reliability test uses SPSS. The questionnaire is reliable if the r value is more than 0,6 [17].

The stakeholder analysis used in this research is power and interest analysis. The power and interest of each stakeholder are identified, and the level of power and interest are determined. The story of power and interest is visualized by the power and interest grid that has four quadrants. Each quadrant determines the strategy.

### 4 Discussion

The implementation of OSHMS during the construction process involves some parties. The involved parties are called the stakeholders. A stakeholder is a person, organization, or other parties involved actively in the project, and their engagement can be affected positively or negatively by the project's performance [5]. Stakeholder engagement can lead the project to success or failure. To manage stakeholder engagement to achieve the project's success, stakeholder management needs to be done. Stakeholder management is essential because each stakeholder has their interests, so it is necessary to manage stakeholders to achieve the goals [18].

The first step is identifying the primary and secondary stakeholders during construction. Primary stakeholders are the major stakeholders that greatly influence the organization's performance, directly link to the programs, and participate in policymaking. Meanwhile, secondary stakeholders are not involved directly with policies, programs, or projects but have concerns about the project's outcomes and give some advice that may affect the decision- making [19]. Construction is a phase during the project, directly at the construction site [20].

This process was done by doing a literature review, interview, and initial expert validation. One of the outcomes of that study is the stakeholder register that consists of 102 stakeholders. Those stakeholders are involved in the implementation of OSHMS at XYZ University. The stakeholder registers are validated by some experts who understand OSHMS implementation at XYZ University. Table 1 is the stakeholder list in the implementation of OSHMS in XYZ University during construction.

### Table 1. Stakeholders list

Code	Primary Construction Stakeholder						
REK	Head of University						
WR4	Vice Head of University 4						
SOU	Secretary of University						
KPU	Head of Occupational, Safety, Health, and Environment						
KJK	Work Safety Management Coordinator of OSHE Organization at XYZ University						
КМН	Work Health and Hygiene Management Coordinator OSHE Organization at XYZ University						
KML	Environment Management Coordinator OSHE Organization at XYZ University						
KMP	Fire Prevention and Urgent Condition Management Coordinator OSHE Organization at XYZ University						
DSL	Director of School of Environmental Science						
DSK	Director of School of Strategic and Global Studies						
DVK	Director of Vocational Programme						
WDV	Vice Director of Vocational Programme						
MUV	General Manager of Vocational Programme						
KIK	Head of Health Science Cluster						
DFK	Dean						
WDK	Vice Dean						
Code	Primary Construction Stakeholder						
MUF	Faculty General Manager						
PKF	Staffs of OSHE at Faculty						
FOD	Facility Operations and Maintenance Directorate						
DPL	Stocks and Logistics Directorate						
SDP	Facility Management and Maintenance Sub Directorate						
PNK	Work Supervisor						
OTO	Area Authority						
EST	Campus Environment Structuring Team						
PKM	Safety Employee						
PBJ	Contractor						
РКА	Executor of Water, Flora, and Fauna Conservation OSHE Organization at XYZ University						
KPG	Supervision Consultant						
КМК	Construction Management Consultant						
P3K	First Aid Officer						

(continued)

#### Table 1. (continued)

Code	Primary Construction Stakeholder							
PMC	Executor of Solid, Liquid, and Gas Waste Management OSHE Organization at XYZ University							
PPF	Executor of Zoonoosis, Venomous, and Poisonous Control OSHE Organization at XYZ University							
Code	Secondary Construction Stakeholder							
PLK	Campus Environmental Security Technical Implementation Unit							
PDN	OSH Data Processor of Contractor OSHE Organization at XYZ University							
PKN	OSH Executor of Contractor OSHE Organization at XYZ University							
PDC	Data Processor of Solid, Liquid, and Gas Waste Management OSHE Organization at XYZ University							
PDF	Data Processor of Zoonoosis, Venomous, and Poisonous Control OSHE Organization at XYZ University							
PDA	Data Processor of Water, Flora, and Fauna Conservation OSHE Organization at XYZ University							



Fig. 2. Power and interest grid of university-level stakeholders

The next step of this research is identifying power and interest. The power and interest of each stakeholder validated in the past step will be determined. Literature research from some literature is needed to identify the power and interest. The result of this process is validated by some experts who did the previous expert validation. The validated power and interest are used in the respondent survey as a reference for the respondents to determine the level of power and interest. The data from respondents are processed by using statistical and stakeholder analysis. The power and interest grid visualizes the level of power and interest. Figures 2, 3 and 4 are the power and interest grid during the construction process at XYZ University.

In addition to the power and interest grid, some outputs include stakeholder categorizing. This categorization is a part of the stakeholder identification process to do stakeholder mapping. This result is supported by a statement stating that stakeholder mapping is one of the processes of stakeholder identification. Besides that, stakeholders



Fig. 3. Power and interest grid of faculty-level stakeholders



Fig. 4. Power and interest grid of project-level stakeholders

can be identified by dividing them into categories [21]. Power and interest grids were made by categorizing all stakeholders based on their authority and work location. That is why categorizing stakeholder is a crucial thing to do.

The stakeholder register, power and interest list, power and interest grid, and stakeholder category are used in the next step. This step is arranging the stakeholder engagement strategy. The strategies are set by considering the stakeholder category, the power and interest of each stakeholder, and the quadrant from the power and interest grid. The strategies are compiled in a table containing information about these stakeholders. Figure 5 is an example of a stakeholder engagement strategy in construction.

The arrangement of strategy is grouped by coloring each table row. The yellow rows represent the university level, the blue rows represent the faculty level, and the orange rows represent the project level. University-level stakeholders manage general-scale projects in XYZ University, faculty-level stakeholders manage faculty-scale projects, and project site-level stakeholders work on the task at the site. Since all stakeholders are included in the first quadrant, Manage Closely, the strategies are similar. The difference thing of the strategy is the meeting agenda because it depends on the interests and engagement of each stakeholder [22]. Besides that, the different specialties of each strategy are the relationships between the stakeholders and the organization, which in this case are the types of stakeholder engagement [23]. The quadrants of each stakeholder were determined by doing stakeholder mapping. Therefore, research can proceed to the last step, arranging a stakeholder engagement management strategy. The strategies were

Code	Stakeholder	Category	Power	Interest	Quadrant	Involvement	Strategy	Frequency
FOD	Facility Operations and Maintenance Directorate	Primary	Has knowledge and ability in implementation and cooperation related to the construction project at UI and in collaboration with UPT K3L UI	Contribute to maintaining OSHE management by taking care of the implementation and cooperation related to the construction project at UI	l <sup>st</sup> Quadrant: Manage Closely	Ensure all OSHE aspects are included in the construction project	Hold meetings related to the current condition of OSHE implementation at construction project (especially for projects which has a contract value of more than five billion or large complexity projects)	Weekly
MNU	General Manager of Vocational Programme / Faculty	Primary	Has a high position as General Manager and has the responsibility to encourage the subordinate units to implement OSHEMS	Review project implementation and encourage the subordinate units to implement OSHEMS	l <sup>≉t</sup> Quadrant: Manage Closely	Carry out hazard and risk analysis and their controls	Hold meetings and cooperate with UPT K3L UI to conduct hazard and risk analysis.	Weekly
РВЈ	Contractor	Primary	Cooperates with UPT K3L UI and provides the necessary items	Contribute to maintaining OSHE management at the construction site	l <sup>st</sup> Quadrant: Manage Closely	Maintain OSHEMS management at the construction site	Hold internal meetings with the consultants and OSHE parties	Weekly

Fig. 5. Stakeholder Engagement Strategy

set in the form of tables containing the stakeholders' names, the category of stakeholders such as primary or secondary, their power and interest, the quadrant from the grids, their engagements, and the strategies for each stakeholder.

The stakeholder engagement strategy is the goal of this research. 38 stakeholders are involved in implementing OSHEMS at UI during the construction process. Those stakeholders are directly involved in the project by visiting the construction site weekly or indirectly by monitoring through the weekly report. The stakeholder engagement strategy is needed to engage the stakeholders in the implementation of OSHEMS.

Power and Interest Grid is a tool for managing stakeholder engagement. Based on the grid, all stakeholders involved in implementing OSHEMS at UI during the construction process are categorized as Manage Closely. It means that all stakeholders should be managed well, involved in the project actively, and given the information comprehensively. Table 2 is an example of the stakeholder engagement strategy. One of the strategy that have been made in coordination meetings between some parties is contractor, consultant, Directorate of Facility Operations and Maintenance, Directorate of Stocks and Logistic Directorate, Vice Rector, and OSHE Organization at XYZ University for discussing project plans. Those meetings were held whenever the stakeholders needed them. From those meetings, we can know whether or not the stakeholder has been involved in their scope. If they have not applied yet, they can be reminded to affect according to their area.

Furthermore, all stakeholders will be involved in decision-making because their opinions matter. Their ideas will be discussed and considered in every decision-making [24]. It is in line with a statement stating that stakeholders included in the Manage Closely category would be involved in the decision-making process. Almost all stakeholders have their strategy for a coordination meeting. The meetings for all stakeholders involved in the construction process are held weekly, not monthly, except for special occasions that have to be held monthly. The meetings are stored offline and face-to-face. However,

since the pandemic came across the world and the regulations make people stay at home, the meetings are held online. Because of that, the frequency of the meetings became irregular and not routine. The vital information can be sent to the group chat. But, before the pandemic, all meetings were held offline.

### 5 Conclusion

Stakeholder management is an essential thing to achieving an organization's goals. Stakeholders can have good or bad impacts on the organization, which is why they should be managed well. Thirty-eight stakeholders are involved in implementing OSHE management at XYZ University during construction. Those stakeholders are divided into two categories: primary stakeholders, which consist of 32, and secondary stakeholders, which include six.

All stakeholders have their powers and interests. The power and interest grid/matrix visualizes those powers and interests. Three grids are divided into three categories based on the work scope level of each stakeholder. This process concluded that all stakeholders are in the first quadrant: Manage Closely. For managing the engagement of all stakeholders, a stakeholder engagement strategy is needed. The strategy is based on each stakeholder's powers, interests, category, and work scope level. Each stakeholder has at least one strategy for ensuring they keep involved in implementing OSHE management at XYZ University during the construction phase.

## References

- K. J. Santoso, K. A. Wijaya, H. P. Chandra and S. Ratnawidjaja, "POTRET Industri Konstruksi Di Surabaya Dalam Masa Pandemi Covid-19," Jurnal Dimensi Pratama Teknik Sipil, pp. 57-64, 2021.
- H. Sitohang And K. Magdalena, "Penerapan Sistem Keselamatan Kesehatan Kerja Dan Lingkungan (K3l) Pada Proyek Konstruksi (Studi Kasus Pembangunan Jalan Tol Cibitung-Cilincing)," Jurnal Teknik Sipil Vol IX, pp. 58-67, 2020.
- H. Chen, H. Li and Y. M. Goh, "A review of construction safety climate: Definitions, factors, relationship with safety behavior and research agenda," Safety Science, vol. 142, pp. 1-14, 2021.
- 4. A. Nawaz, X. Su, Q. M. U. Din, M. I. Khalid, M. Bilal and S. A. R. S. Shah, "Identification of the H&S (Health and Safety Factors) Involved in Infrastructure Projects in Developing Countries-A Sequential Mixed Method Approach of OLMT-Project," International Journal of Environmental Research and Public Health, pp. 1-18, 2020.
- 5. Project Management Institute, A Guide to the Project Management Body Of Knowledge (Pmbok Guide) Sixth Edition, Pennsylvania: Project Management Institute, 2017.
- Setyoko, "Sistem Manajemen Keselamatan Kerja (Smk3) Pada Perusahaan," Orbith Vol. 13, pp. 172-177, 2017.
- F. Pangkey, G. Y. Malingkas and D. Walangitan, "Penerapan Sistem Manajemen Keselamatan Dan Kesehatan Kerja (Smk3) Pada Proyek Konstruksi Di Indonesia (Studi Kasus: Pembangunan Jembatan Dr. Ir. Soekarno-Manado)," Jurnal Ilmiah Media Engineering Vol. 2, No. 2, pp. 100-113, 2012.
- 8. R. E. Freeman, Strategic Management: A Stakeholder Approach, Boston, 1984.

- N. A. M. Isa, N. A. Hamid and T. P. Leong, "A Stakeholder Analysis of the klia2 Airport Terminal Project," 7<sup>th</sup> Asian Conference on Environment-Behaviour Studies, 09–10 April 2016.
- Y. Bdaiwi, "Stakeholder Analysis using the Power Interest Grid," 24 March 2017. [Online]. Available: https://www.projectmanagement.com/contentPages/wiki.cfm?ID=368897&thi sPageURL=/wikis/368897/Stakeholder-Analysis-using-the-Power-Interest-Grid#\_=\_.
- 11. A. Ilinova, A. Cherepovitsyn and O. Evseeva, "Stakeholder Management: An Approach in CCS Projects," Saint- Petersburg Mining University, Saint-Petersburg, 2018.
- 12. R. Kumar, Research Methodology. A Step-by-Step Guide for Beginners Fifth Edition, SAGE Publication Ltd., 2019.
- 13. S. Hernawati, Metodologi Penelitian dalam Bidang Kesehatan, Ponorogo: Forum Ilmiah Kesehatan (Forikes), 2017
- 14. Usmadi, "Pengujian Persyaratanan Analisis," Inovasi Pendidikan, pp. 50-62, 2020.
- 15. Sugiyono, Metode Penelitian Kuantitatif Kualitatif dan R&D, Bandung: Alfabeta, 2013.
- R. W. E. Yani, "Uji Validitas Dan Reliabilitas Dalam Penelitian Epidemiologi Kedokteran Gigi," Stomatognatic, pp. 27-34, 2011.
- G. Ursachi, I. A. Horodnic and A. Zait, "How reliable are measurement scales? External factors with indirect influence on reliability estimators," Journal of Organizational Behavior, p. Procedia Economics and Finance, 2015.
- I. Ganesha and D. Hartanti, "Analisis Stakeholders Management PT ABC Terkait Kasus Kebakaran Lahan," Jurnal Riset Akuntansi Dan Keuangan, pp. 229-240, 2019.
- T. P. Pangaribuan and A. I. Munandar, "Analisis Stakeholder Dalam Kebijakan Pembatasan Sosial Berskala Besar (P SBB) Jakarta Periode Tahun 2020," Jurnal Pemerintahan dan Politik Vol. 6 No. 2, pp. 60-66, 2021
- A. B. Vheatrieze and K. R. Ratnayanti, "Tinjauan Manajemen Risiko Pra Konstruksi, Pelaksanaan Konstruksi, dan Pasca Konstruksi Pada Proyek Pembangunan Gedung Student Center Politeknik Negeri Indramayu," in Seminar Nasional dan Diseminasi Tugas Akhir 2021, Bandung, 2021.
- K. Gupta, D. Crilly and T. Greckhamer, "Stakeholder engagement strategies, national institutions, and fir m performance: A configurational perspective," Wiley Strategic Management Journal, pp. 1869-1900, 2020.
- D. W. Rahma, A. Herdiyanti and H. M. Astuti, "Perencanaan Strategi Manajemen Stakeholder untuk Program Implementasi ERP di PTPN XI," Seminar Nasional Teknologi Informasi, Komunikasi dan Industri (SNTIKI) 9, pp. 102-112, 18–19 May 2017.
- D. M. Salvioni and A. Almici, "Circular Economy and Stakeholder Engagement Strategy," SYMPHONYA Emerging Issues in Management, pp. 26-44, 2020.
- E. S. Kinanthi, Analisis Penerapan Stakeholder Engagement Melalui Stakeholder Mapping: Studi Kasus Pada Spare Part Division Perusahaan Otomotif, Jakarta: Universitas Indonesia, 2017.

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