

## THE ROLE OF HUMAN RESOURCE MANAGEMENT IN THE SUCCESS OF THE ENGINEERING, PROCUREMENT & CONSTRUCTION AND OPERATION MAINTENANCE PROJECTS AT PT ELNUSA TBK

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### ABSTRACT

*Implementation of a project work is greatly depended upon the quality of human resource management. Engineering, Procurement & Construction ("EPC") and Operation Maintenance ("OM") at PT Elnusa Tbk (Elnusa) projects are considered labor-intensive industries. Hence, the human resource quality aspect becomes more critical. This is the condition faced by the EPC-OM project at Elnusa. These issues regarding human resources management do not only appear at the head office but also in the daily operational problems. For this reason, it is essential from the aspect of human resource management to support and add value to the successful implementation of the project. This conceptual paper is to study how the role of the human resource management aspect contributes and supports the success of the EPC-OM projects at Elnusa. Further empirical research should be conducted qualitatively and/or quantitatively to have a more solid finding.*

*Keywords:* Human Resource management, Work-project, Operation Maintenance

### INTRODUCTION

Elnusa founded in 1969 under the name PT Elektronika Nusantara. The company changed its name to PT Elnusa in 1984. Elnusa became a public listed company in 2008 by being listed on the Indonesia Stock Exchange. The company's business segmentation is covering three categories: Upstream Oil & Gas Services, Energy Distribution & Logistics Services, and Support Services. EPC-OM business is incorporate in Upstream Oil & Gas Services. EPC provides services to manage oil and gas in supporting facilities with infrastructure development projects. OM offered services to clients of operation and maintenance of surface oil and gas facilities. It is a highly labor intensive process, where the final results depend heavily on the quality of the human resource management conduct.

This conceptual paper is intended to identify and understand the aspects in human resource management which supports the successful implementation of the EPC-OM projects through an extended review of Elnusa's internal human resource management practices and analysis of literature. This paper is significant because it will explore how human resource management affects the successful implementation of EPC-OM projects and make recommendations for future research.

### LITERATURE REVIEW

As a trusted energy services company in Indonesia, Elnusa has been servicing many customers, including national and multinational companies. The EPC-OM business which is currently part of Division of Production, Operation & Maintenance Services (POMS), operation division in Elnusa, showing rapid growth during the period 2017 – 2018. As reported in the 2018 Elnusa Annual Report, "the business managed to increase revenue by 159.9% compared to 2017, hence it became the largest revenue contributor for the POMS of 34.3% in 2018. During 2018 the total projects have undertaken EPC OM business is 12 (twelve) projects consisting of 6 (six) OM projects and 6 (six) EPC projects" (p.106).

Human resource management functions can contribute significantly to the success of EPC-OM project i.e., through (Loosemore : 2003):

1. Developing a Strategic Human Resource Management (SHRM) strategy. This strategy must be aligned with and support the business strategy. There are 6 (six) characteristics of SHRM strategy (p. 42) :
  - It recognizes the outside environment: this comprises a set of opportunities and threats to the organization that must be known and taken account of by the strategic decision-making process. They can include social, demographic and labor-market changes, legislation, economic conditions, technology, political forces, etc.
  - It recognizes competition and labor-market dynamics: these affect wage/benefits levels, unemployment rates, and working conditions, and define the requirements that an organization must provide to remain competitive in the labor market.
  - It has a long-range focus: a strategic focus implies that consideration is given to the long-term direction and objectives of the organization. This will depend on the management philosophy of the organization regarding where it wants to position itself.
  - It has a decision-making focus: this means that the organization consciously chooses to direct and commit its human resources in a particular direction.

- It considers all stakeholders: a strategic approach demands that the organization take account of the views and interests of all stakeholders, internal and external.
  - It is integrated with corporate strategy: perhaps the most essential characteristic is that HR strategy should be integrated with the firm's overall corporate strategy.
2. Developing an SHRM policy which is aligned with the organizational goals (p. 42 - 43), which ensures :
- Culture change: developing an appropriate organizational culture which is closely aligned with corporate objectives;
  - Organization design: developing the organizational roles and relationships to take account of new developments;
  - Organizational effectiveness: developing organizational capabilities in terms of teamwork, communication, productivity and customer service, and improving the ability to manage change;
  - Resourcing: recruiting, training and developing the people required to achieve the organization's strategic objectives;
  - Performance management: using performance appraisal to monitor the performance of employees;
  - Reward management: developing compensation mechanisms which convey to employees the organization's values and performance expectations by rewarding appropriate levels of performance in these areas;
  - Motivation: developing an intrinsically and extrinsically motivated workforce through financial and non-financial rewards;
  - Commitment: developing a feeling of 'mutuality' within the organization where the needs of individuals are integrated with those of the organization;
  - Employee relations: developing strategies for reducing conflict between employees and management, and increasing cooperation between different groups within the organization
  - Flexibility: developing a structure, systems, and techniques which allow the organization to respond flexibly to change.
3. Having excellence process and activities in day-to-day operational aspects of the function. These aspects are (p. 77 - 78):
- Employee resourcing is concerned with *planning* for the needs of the organization, *defining the roles and responsibilities* necessary to achieve these goals and then *recruiting* and *selecting* the people to fill these roles.
  - Human resource development is concerned with managing the *performance* of employees in such a way that they contribute to organizational objectives. This includes *training, management development*, and the *management of structures* and *career paths* to ensure clear succession routes through the corporate hierarchy.
  - Reward management is about defining the *wage and benefit structures* in a way which responds to the needs and expectations of employees and ensures their commitment to the organization. Together these interrelated activities ensure the supply, development, and motivation of employees, and their careful management is a prerequisite to achieving the human resource stability necessary for organizational growth and development. In most large organizations, they are supported by information and communications technology (ICT) tools known as *human resource information systems*.

With so many projects managed, Elnusa must be able to ensure effective organizational management. Project-oriented companies are the ones which: (Martina Huemann - Anne Keegan - J. Rodney Turner; 2006):

1. define as "management by projects" as their organizational strategy;
2. apply projects and programs for the performance of complex processes;
3. manage a project portfolio of different internal and external project types;
4. have specific permanent organizations like a project portfolio group, or a Project Management office to provide integrative functions;
5. view the organization as being project-oriented.

The EPC-OM project is very complex. From a human resource management perspective the challenge of the project is due to the nature of the industry's products and services. According to Loosemore (2003), this industry has common characteristics, which include the following:

- **Unique, one-off nature.** Construction projects tend to be one-off; the organizations are designed and constructed to meet a particular client's product and service needs. This situation can lead to significant risks for people working on a project, which mostly arise from learning-curve problems associated with new work activities and ever-changing workplace relationships.

- **The tendency to be awarded at short notice**, many construction projects are awarded following a period of competitive tendering, where possibilities for thorough planning are often limited. Having been awarded a contract, the contractor has to mobilize a project team comprising an appropriate blend of skills and abilities to meet the project demands quickly.
- **They are reliance on a transient workforce**. Construction projects are, for the most part, constructed in the site. This necessitates the employment of a temporary workforce which can move from one project location to the next. This transience poses many problems for workers, such as longer working days, more expense in traveling to work, and managing work-life balance issues, since their families may not be as mobile.
- **Increasingly demanding clients**. In recent years there has been a steady increase in the quality of service and product expected by clients procuring construction work. Inevitably, this requires a considerable commitment from those working in the industry, which tends to manifest itself in unsafe working practices, long working hours, and increased levels of stress.
- **A male-dominated culture**. Construction is one of the most male-dominated industries. Men dominate both craft trades and professional and managerial positions within the sector. This reliance on male employment leads to many challenges, such as skills shortages caused by recruiting from only a portion of the population, difficulties in the management of equal opportunities and workforce diversity, and considerable challenges in terms of creating an accommodating atmosphere in which individuals' diverse skills and competencies are fully utilized.

Based on the explanation above, imbalance in human resource management practices in accordance to project demands and organizational needs will result in employees' dissatisfaction, reduced commitment, industrial conflict, increased turnover, more accidents, recruiting problems and a continued poor public image. And also human resource practices are important for safety management. These include: giving out incentives based on an individual's safety performance; meting out punishments; providing safety training; maintaining close communication and feedback; allowing workers to participate in safety matters; management commitment; evaluating workers based on their safety performance; and providing welfare benefits (Diana N.C. Lai, Min Liu, Florence Y.Y. Ling : 2010).

Other research conducted by Malkani - Kambekar (2013) said that there are critical issues in human resource management in the construction industry:

- Motivating and retaining the workforce (rank 1 / avg. rating: 1.6)
- Hiring the right people (2 / 2.2)
- Developing the correct process (3 / 3.2)
- Helping employee develop the right skill (4 / 4.2)
- Creating a culture of innovation (5 / 4.4)
- Succession planning (6 / 5.4)

Besides the issues which is mentioned above, there are also issues that becomes the characteristic in EPC-OM projects, which are the shortage of skilled labors and training to the employee. Another initiative that can be done to overcome the shortage of labors is by outsourcing. In many countries, outsourcing activities is a long-established practice in the construction industry. There are 2 (two) types of outsourcing: Labor Subcontracting and Activities Subcontracting. Six out of nine respondent choose to Labor Subcontracting because of the following reason: focus on core activity (42.85%); reduce the administrative time (28.58%); lack of resource (14.29%); and improve quality (14.29%).

Training is crucial to enhance the skill of the employee. The research that conducts by Nguyen, H.T. – Hadikusumo, B. (2017), show that human resource development gives an impact on the success of the project. However, the research by Malkani – Kambekar (2013), shows that many companies do not have a specific training module and program for the employee. It also discussed the barrier they are facing in an integrated training program as follows:

- Higher expenses for construction training courses
- Short term contract of a worker
- A more significant number of various type of learning point.
- Little attention of the client on the importance of skilled labor in the project
- Time-consuming process.
- Lack of initiative among the workers.

Another research also shown the same result. In construction industry, there are very few structured workforce management programs. If any human resource development is conducted on a project, it is usually in the form of on-the-job training, with very few resources available at the project level for further training and development of the workforce (Stefanie G. Brandenburg, Carl T. Haas, F.ASCE, Keith Byrom : 2006).

Another research done by Project Management Institute shows that Project Manager competences consists of three separate dimensions:

- Project Manager Knowledge Competence — What the project manager knows about the application of processes, tools, and techniques for project activities.
- Project Manager Performance Competence — How the project manager applies project management knowledge to meet the project requirements.
- Project Manager Personal Competence — How the project manager behaves when performing activities within the project environment; their attitudes, and core personality characteristics.

To be recognized as fully competent, a project manager would need to satisfy each of the three dimensions mentioned above (Project Management Institute, Inc.: 2007 – p.3).

## **RESEARCH METHODOLOGY**

This research is using a conceptual methodology approach. First, this paper only reviews internal practices in Elnusa. Second, this conceptual paper relies on the secondary data from internal Elnusa previously collected by other researchers and related literature review. Literature review and secondary data are analyzed toward findings for both theoretical and managerial implications.

## **FINDING AND DISCUSSION**

In EPC-OM projects, the involvement of the human resource management function is crucial at all stages of the project. It is starting from the process of preparing tender documents related to organization structure and materials about employees who will be involved in the related project. After the awards for projects obtained, it continues with the process of preparing for the project implementation.

In this pre-operation stage, after the internal employee mapping process complete, and additional personnel is still needed then the recruitment process which involved all the stakeholders began to be carried out intensively. Stakeholders in the recruitment process in the EPC-OM project are numerous because they involve: candidates, internal users, clients, and sometimes even the authorities, local government, and non-formal leaders around the project site. Based on experience in Elnusa, in some cases, the award can be a delay or postponed because of the internal issues from the client or external factor outside the authority of the client or contractor. This makes the planning of employee utilization in the project disrupted. New employees who have been recruited and prepared have to be idle, so they have to wait for assignments. In terms of personal costs, this also makes it inefficient. On the other hand, if we only make the recruitment process after an award is issued, this can also potentially interfere with project preparation. On average, the time available to meet the needs of personnel in an EPC-OM project is 1 - 3 months from the award.

The next step is the operation phase of the project. In this stage, all functions of human resource management plays an important role. It starts from recruitment in the event of employees' turnover and/or the need for additional employees. Then, the need for performance appraisal, training, and employee's development program, including payroll and other compensation benefits. And finally it is also related to solving problems of industrial relations. Proper, and optimal human resource management is needed with the very large number of employees and number of projects running that must be managed. Based on the report on the number of employees until June 2019, the number of employees involved in the EPC-OM project in Elnusa amounted to approximately 1000 employees. Benchmarked from the conditions in Elnusa, the number of female employees is not more than 1% of the total employees currently in the EPC-OM project (p.3-4).

Based on the project organization and the duties and responsibilities of each position, the composition of the project team can consist of the project management team and project crew. The project management team is tasked with managing the managerial, leadership, and commercial aspects of the project. While the project crew has to carry out technical work in the project. In term of work location, usually, the project management team is located working in the office. Whereas the project crew works in field/site-based. What has been done so far in Elnusa, the employment relationship status of employees involved in an EPC-OM project is project-based where the employment relationship only lasts for the duration of the project and will end when the project ends. This was mainly applied to the project crew. For project management team under certain conditions, if there is a need or conformity of qualifications in other projects, the related employee can be transferred to another project. Transience also arises within projects, since the composition of teams usually changes during different project stages, involving people from many organizations, backgrounds, and locations. One of the most important things, in this case, is the management of employee schedules. When at the same time, several projects are running, so in the experience so far, a particular employee can be assigned to work on more than one project. Or other conditions are when replacements must be made, and the replacement arrangements must be arranged so that they do not interfere with project operations or cause complaints from clients. Regular coordination with the client is very helpful in managing client expectations of the services provided. Service Quality Meeting or Evaluation Meeting is one of the activities carried out to review the performance of the work that has been done.

In the subject of the lack of skilled workers, Elnusa experienced this. EPC-OM business has developed rapidly in the last 2 years, while in the internal company there are not too many employees who have the required group skills in this business, the strategy is to be pro-hired, especially in positions that include project management team and those who need specialized skills. Elnusa using both types of outsourcing to support EPC-OM projects, Labor Subcontracting and Activities Subcontracting. The Labor Subcontracting mostly used to assist in fulfilling for project crew (low skill labor). While the Activities Subcontracting mostly used to aid in completion of high skilled works.

In Elnusa, we realize that the company's success cannot be separated from its success in managing and maintaining a competent and professional employees. For that, human resource development is critical. The company, has continued to work on fostering and developing its HR to fulfill the various competencies and forms of expertise required to support the company's operations. This human resources development process is carried out through multiple means, such as training programs, sharing session, competency mapping, succession planning and talent management preparation, leadership and technical development program, multi-talent development program, coaching and mentoring, and also assignments and work transfers in the form of rotations and promotions (Elnusa Annual Report 2018: 163 - 167). Based on the research, the companies implemented multiskilling primarily

to reduce their labour costs and to retain a skilled core workforce. This strategy is well suited to maintenance projects, due to the broad variety of tasks that should be performed by the same workforce, but it also offers benefits in capital construction projects. Multiskilling should be implemented on a project only after it becomes a part of the company's managerial scheme and after training, recruiting and compensation strategies have been determined (Carl T. Haas, Ana Maria Rodriguez, Robert Glover & Paul M. Goodrum : 2010).

Training is specifically carried out by the Elnusa Petroleum School (EPS). EPS is responsible for ensuring the implementation of training and learning programs, for reviewing employee competency after these training sessions, and for ensuring that there are documentation and updated management materials as a means of supporting the improvement of employee competency. Throughout 2018, Elnusa experienced an increase in its amount of training session staff-hours. This number had grown from 55,036 hours in 2017 to 73,247 hours in 2018. It resulted from an increase in the company's business, especially when it came to its EPC-OM businesses that resulted in the company needing to close the gap on its employee competency levels and meet project certification requirements (Elnusa Annual Report 2018: 164).

Another thing about employees' development that is very important and must be considered in EPC-OM project is filling and developing the competency related to human resource management to all the project managers. The objective is to have a line manager who can act as human resource manager which can manage lead the project well. This is because, in EPC-OM project, there is a devolution of HRM responsibility to Project Manager (Loosemore 2003: 4 / Dr. Shweta Sethi - Neeraj Kataria: 2017). In EPC-OM the multidisciplinary characteristics of its project teams present particular challenges for managers attempting to secure appropriate staff for projects at different stages and based in geographically dispersed locations. In effect, construction projects form autonomous business units with their own multifunctional teams and objectives, and this inevitably means that line managers must take on responsibility for aspects of the human resource management function. In reality, proper training related to human resource management is still rare in this industry. In Elnusa, EPC for Non-EPC program has been held to provide training for employees. Some material on human resource management has been included in the syllabus. However, complete material needs to be prepared for Project Managers. Besides human resource management competency, another skill that needs to be mastered by a project manager is leadership, decision-making, and responsibility perception (Nguyen, H.T. – Hadikusumo, B.; 2017).

The last stage is when the project is finish. In this post-operation stage, a review of the needs of other projects with the availability and utilization of employees is critical. If there is no match between supply and demand, the final step is to end the working relationships as well as the possibility to create conducive conditions for industrial relations in the company.

## CONCLUSIONS

In this conceptual paper, we conclude that to be able to support the implementation and success of an EPC-OM project; an SHRM strategy is needed in managing the project. This strategy must be aligned with company/business targets and goals. The SHRM strategy will be the basis for developing HRM rules and policies. It starts with Employee Resourcing, which covers the *planning* for the needs of the organization, *defining the roles and responsibilities* necessary to achieve these goals and then *recruiting* and *selecting* the people to fill these roles.

The aspect of human resource development is very crucial in managing the *performance* of employees in such a way that they contribute to organizational objectives. This aspect includes *training, management development*, and the *management of structures* and *career paths* to ensure clear succession routes through the corporate hierarchy. Specific about human resource development is also very important and affect the success of the project because related to the fulfillment of skills and competency of Project Managers as Line Managers and HRM Manager.

Then aspect of reward management is about defining the *wage and benefit structures* to response the needs and expectations of employees and ensures the commitment to the organization. And the last aspect is about managing *employment status* and *industrial relation*. This aspect is very crucial to create conducive conditions for industrial relations in the company.

## LIMITATIONS AND FUTURE RECOMMENDATION

The limitation of this conceptual paper is that it has not been tested quantitatively nor qualitatively. In the future, we recommend that this research should be conducted empirically, both quantitatively and/or qualitatively to get a more solid finding.

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