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HOW THIS BOOK WORKS

This book demonstrates the corresponding relationships between the organizational context (namely plant technology and corporate size of the turnaround maintenance) and regulatory structuring processes (centralisation and formalisation) that leads to a high plant turnaround maintenance in the organizational performance among the process-based industries in Malaysia.

More specifically, five critical areas ail many Plant Managers:

1. Does the organizational size of turnaround maintenance relate to plant technology?
2. Do the organizational structure, and structuring processes of the turnaround maintenance relate to the plant technology and size of the turnaround maintenance?
3. Do structuring processes influence the organizational performance of turnaround maintenance?
4. Does the corresponding relationship between plant technology and organizational structuring processes affect the corporate performance of the turnaround maintenance?
5. Does the corresponding relationship between the organizational size and the regulatory structuring processes affect the corporate performance of turnaround maintenance?

The answers to the above forms an array of knowledge of the relationships between the organizational contexts, organizational properties, and performance of turnaround maintenance in the process-based industries in Malaysia.

ADAPTATION FROM AN EMPIRICAL STUDY

The book is based on a study undertaken to examine the effect of corresponding relationships between the organizational contexts and organizational characteristics on the performance of plant turnaround maintenance among the process-based industries in Malaysia that were barely explored by the previous organizational theorists and researchers. The findings of the study provide useful insights on how and why the regulatory structure relates to the corporate performance of turnaround maintenance. The acquired knowledge and research findings provide an indispensable guide for managers and engineers alike in organising and managing for a successful plant turnaround maintenance in a large scale process-based industries in Malaysia.

The study also contributes a pertinent input to the organising function of the workforce with assignments, complex and discontinuous events especially in the field of engineering such as plant turnaround maintenance. It also identifies the variations in the organizational structuring processes that contribute to a low turnaround maintenance organizational performance.

Indeed, the findings contribute to knowledge in the field of management in the Malaysian context, particularly the area of asset management in heavy industries. Furthermore, the results complement the current project management texts as the turnaround maintenance has all the dimensions of project management.

Nevertheless, turnaround maintenance management has a few distinct characteristics that make it "unique" project management. The low tolerance level of the higher management towards delays in turnaround maintenance is incomparable to any other project organizations in the business environment. The delays in turnaround maintenance are very costly.

The study marks the beginning of further empirical works on organization and management of plant turnaround maintenance that was not accorded by the important priority before. The findings of the present study, for instance, the centralisation and formalisation, contribute to the knowledge of human resource strategy in

temporary organization settings. Furthermore, the measurement and operationalisation of centralisation and formalisation that are used in the present study are other contributions to knowledge. Even though the two are mostly cited dimensions for organizational structuring processes in numerous organizational studies, the present study put forth a new item scale as proxies to both aspects. The present study also expands the frontier of application of structural contingency theory to the turnaround maintenance environment.

CHAPTER GUIDES

This book has been designed to discuss essential topics for practising Plant Managers:

1. Case studies of plant turnaround maintenance
2. Plant Technology
3. Organizational size, structure, and performance of the turnaround maintenance
4. Relationship of the organizational context, structuring processes, and organizational performance of the turnaround maintenance.
5. Issues and concerns in managing turnaround maintenance

Plant turnaround maintenance is a valuable asset management and unique to process-based industries. It is an activity that is aimed to revitalise, maintain, and improve the plant facilities for optimal and efficient performance. The plant turnaround is characterised by a multi-faceted business process which comprises of three broad elements of engineering, business, and organization. The event caused a significant impact on the bottom line of the company due to the production shut down. It demands a huge workforce from internal and external sources a temporarily to execute the maintenance activities.

Notwithstanding the above, its organizational aspect is a scarcely understood and explored a subject in management circles. As put forth by Gondolfo and Vichich (2007, p. 4), “the organization structure is necessary, both in terms of numbers of resources and the composition of players for a high complexity turnaround is typically not well understood”. As such, limited studies are available on the organizational dimensions of turnaround maintenance.

Also, Plant Turnaround Maintenance Practitioners and Consultants in the United States have highlighted some problems that are typical to this event. They include, among others, schedule slippage, work scope growth, cost over-run, issues on compliance, inadequate resources, and startup problems.

These depictions imply that turnaround maintenance requires an efficient organization to ensure its successful implementation. This is attainable through the appropriate organizational structure and structuring processes. As such, it is natural to characterise plant turnaround performance to the qualities of its organizational structure. The apparent conflicting objectives of the turnaround maintenance between cost and duration, and duration and safety. For example, this leads to the contradictory demands for organizational resources in the process of executing the turnaround maintenance activities. The diversity of performance objectives, the highly regulated operational environment, the need for integration and the coordination of multiple interfaces across the turnaround maintenance activities further suggest the critical importance of suitable organizational structures and the organizational structuring processes.

Therefore, there is a need to close the gap in knowledge of the turnaround maintenance organization. The primary objective of the present study is to examine the thesis that the corresponding relationships between organizational contexts (namely plant technology and organizational size of turnaround maintenance) and organizational structuring processes (centralisation and formalisation) influence the organizational performance of plant turnaround maintenance of the process-based industries in Malaysia.

SIGNIFICANCE FOR PLANT MANAGERS

The Study provides an indispensable guide for managers and engineers alike in organising and managing for a successful plant turnaround maintenance in a large scale process-based industries in Malaysia. It contributes a pertinent input to the organising function of the workforce with irregular assignments, complex and discontinuous events especially in the field of engineering such as plant turnaround maintenance.

Indeed, the findings will contribute knowledge in the field of management in the Malaysian context, particularly the area of asset management in heavy industries. Furthermore, the results complement the current project management texts as the turnaround maintenance has all the dimensions of project management. The findings of the present study, for instance, centralisation and formalisation, contribute to the knowledge of human resource strategy in temporary organization settings. Also, the measurement and operationalisation of plant technology, organizational size, centralisation, formalisation, and organizational performance used in the present study constitute a significant contribution to the current body of knowledge.