

DOING MORE WITH LESS – THE BENEFITS OF A LOGISTICAL ANALYSIS

By Chuck Roberts



In today's economic climate, businesses and government entities alike are challenged by the need to accomplish more using fewer resources, whether those resources are financial, human, capital equipment, or supplies. This need for improved efficiency can apply regardless of whether the organization is experiencing growth, maintaining its current size and capabilities, or contracting. Careful consideration is required in the identification and implementation of such efficiency improvements to ensure their technical and economic feasibility, and to prevent undesired adverse impacts to the organization's cost structure, quality of products or services, and employee morale.

A proven, proactive method for identifying feasible efficiency improvements is to conduct a Logistical Analysis. This begins with an examination of current practices, definition of the existing work flow, and identification of how and why resources of various types are applied in the work process. This approach is analogous to performing a mass or energy balance on an industrial process. However, it takes into consideration other factors such as human resources and the four dimensional aspects (three physical dimensions plus time) of introducing labor and materials to the process, as well as methods for delivery of the work product. The Logistical Analysis can also be instrumental in identifying external factors that impact the process under study, and can be used as the basis for implementing changes to those external factors that will produce a positive effect.

The time required for initial data gathering depends on the size and complexity of the work process, and involves a visual examination of work areas, review of work procedures and products, and interviews with management and staff. Once the initial data is collected, a variety of analytical tools can be used to identify opportunities for improvement. Such tools can include Root Cause Analysis, Front End Analysis, Performance Based Supportability Analysis, Life Cycle Cost Analysis, Risk Analysis, Failure Mode and Effects Analysis, and Reliability Centered Maintenance Analysis, among others. The results of these analyses are then typically compiled in a report that presents proposed modifications to the work process or facility layout likely to result in greater efficiency and reduce the quantity resources required to achieve the same or better output. It is important to review these recommendations with both management and staff to ensure financial, technical, and operational (i.e., ability to achieve the desired personnel cooperation) feasibility, as these factors will greatly influence attainment of the desired results.

Once recommendations are reviewed and accepted by management, a plan is then typically developed defining the strategic approach and tactical actions necessary to effectively implement the selected modifications. The implementation plan generally also includes a system of metrics for evaluating implementation progress and assessing changes in performance. This provides a feedback mechanism for ensuring that the modifications produce the desired results, and facilitates the identification and implementation of adjustments to the approach, if needed.

Chastain-Skillman is currently conducting a Logistical Analysis to assist 3SI Security Systems, Inc. (3SI) in improving the efficiency of their operations in Zaventem, Belgium. 3SI, which manufactures cash protection systems used in banks and Automated Teller Machines (ATMs) worldwide, has experienced record growth for the past 18 years. As its operations expanded, inefficiencies resulted from the inability of the existing work flow process to accommodate the need for additional space, raw materials, labor, product modifications, output, and other related factors.



Greg Van Lint, 3SI Operations Manager for Europe, and Bart Milis-san, 3SI Executive Vice President and General Manager, discuss how to best meet client needs outside the 3SI facility in Zaventem, Belgium.

The Logistical Analysis is being conducted in advance of 3SI's relocation of operations to a larger facility and involves considerable interaction with management and line personnel in various departments. This approach will ensure that the new facility is configured in a manner that will exhibit a high level of efficiency upon startup, and provide the flexibility to efficiently accommodate continued growth. The Logistical Analysis will also be used to identify other opportunities for improvement, such as standardization of product components and modifications to the front end of the product sales and product development cycle, which will provide more accurate forecasting, leading to more efficient procurement and application of resources.

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