

## HR IMPLICATIONS of KAIZEN

Summary: Operational changes happen quickly during a Kaizen workshop. When these changes are combined with a supportive HR strategy sustainable results are achievable.

A Kaizen workshop physically demonstrates the potential for double-digit performance improvements within a two-week period. Workshop participants learn to lead a participative process geared toward the rapid transformation of work processes based on the concepts of Flow, Takt and Pull. Understanding the basics of these concepts will help prepare the HR professional to design required strategies in tandem with operational improvements.

**FLOW:** The foundational concept of Kaizen requires that a **repetitive** and **sequential** and **progressive** build-up of product or information exists. Viewing the product moving through the factory or office as water moves in a river is the challenge of **flow**.

Repetitive: Customer demand is sufficient to require that similar product be produced every day.

Sequential: Repetition of production allows a series of steps to be defined in the most efficient order.

Progressive: Each step of the process is additive to previous steps.

Visualization of flow is facilitated by the creation of a "flow map" using symbols to pictorially describe what the material experiences. This map is a fundamental document for the work that follows.

**TAKT:** A German word for "rhythm / beat." The second foundational Kaizen concept that defines the rate at which product must flow through the line. The rate of flow is stated in terms of time per unit and is calculated as follows:

$$\text{Takt time} = \frac{\text{Available time on one shift (approx. 450min/day)}}{\text{Customer Demand (units required/day)}}$$

26 secs/window rack air conditioner is a takt time in a residential air conditioner factory. This means that every twenty-six seconds a unit must be ready for the customer. Each person's work content along the line is stated in relation to this rate of flow.

**PULL:** The third concept of Kaizen governs the amount of material required to maintain flow in the system. The principle rule is to only begin work on another unit when the previously completed work has been taken by the next operator. This defines a system based on replenishment as opposed to accumulation. Each time a person buys milk from the small, corner grocer "pull" is experienced. A small amount of material is kept on-hand due to short shelf life; the customer pulls milk from the refrigerator, containers slide forward leaving an empty space in the back. The instructions left with the stockroom person are, "Any time you see the empty space, fill it with another container of milk." Shop floor scheduling conducted in this way is often called a "Kanban" system.

Process re-designs based on these concepts increase in effectiveness when human resource implications are understood and addressed. Culture, physical layouts, work design and people issues are just a few of the areas where the HR professional can help the organization create appropriate responses.

**Culture:** A Kaizen workshop stresses the importance of involving those who know the process in the improvement of the process. Sharing key business data, such as the forecasted market numbers for the next year, creates a business context within which people can place their improvements. This means making more detailed business information available to a broader base of people and then allowing them the access to organizational resources to implement required changes.

**Implication: Organizations with high control needs must understand why and determine the appropriateness of sharing control.**

**Physical layouts:** Kaizen concepts coupled with the desired culture provides guidance in workplace design. High density layouts, removal of chairs and benches, elimination of objects obstructing the view of an area, problem solving areas, co-location of dis-similar processes and visual controls such as andon boards, skill matrices and kanbans all require people to adapt to new environments.

**Implication: Indiscriminate and poorly discussed changes can result in equity issues among groups, loss of personal identity, anger at loss of personal comfort/status items and feelings of exposure.**

**Flow:** Equipment is co-located to facilitate flow and the balancing of cycle times to takt time.

**Implication: Effective line-balancing requires that employees have the ability and skills to operate in an environment demanding greater variety of tasks performed. An assessment of the current job descriptions will determine if the organization would be benefited by re-writing job descriptions and addressing related compensation issues.**

**People:** Kaizen can be more than a one-time workshop. Sustainable results are contingent on the capability of all employees; management, technical and line. Capabilities to provide positive leadership and make decisions based on the new measurements required by flow, takt and pull; capabilities to provide technical information to people in a way that is meaningful and useful to them; capabilities to produce product within a "cell;" capabilities to problem solve and effectively team with other people to achieve specific objectives.

**Implications: Selecting, equipping, rewarding and retaining people with the required skill sets to function in a Kaizen environment requires an integrated human resource strategic plan.**