Glossary of Operational Terms

Appraisal Cost

Appraisal Cost is a component of 'Cost of Quality'. This is the cost incurred on Preventing the defects. e.g. Cost to establish Methods & Procedures, Cost to Plan for Quality, Cost incurred on Training.

Brainstorming

A method to generate ideas. Groundrules such as -no idea is a bad idea- are typical. Benefit of brainstorming is the power of the group in building ideas of each others ideas. A problem solving approach/technique whereby working members in a group are conducting a deductive methodology for identifying possible causes of any problem, in order to surmount poor performance in any process or activity pursued by the group members and facilitator.

Design of Experiments (DOE):

A Design of Experiment (DOE) is a structured, organized method for determining the relationship between factors (Xs) affecting a process and the output of that process (Y). Other definitions:
1 - Conducting and analyzing controlled tests to evaluate the factors that control the value of a parameter or group of parameters.
2 - "Design of Experiments" (DoE) refers to experimental methods used to quantify indeterminate measurements of factors and interactions between factors statistically through observance of forced changes made methodically as directed by mathematically systematic tables.

Jidoka

The Toyota Production System (TPS) is frequently modeled as a house with two pillars. One pillar represents just-in-time (JIT), and the other pillar the concept of jidoka. The house will not stand without both pillars. JIT is fairly well understood, but I believe jidoka is key to making the entire system stick. A lot of failed implementations can be traced back to not building this second pillar. Jidoka is "autonomation" or "automation with a human touch." This is usually illustrated by example of a machine that will detect a problem and stop production automatically rather than continue to run and produce bad output.

Kanban

Kanban is a Japanese term. The actual term means "signal". It is one of the primary tools of a Just in Time (JIT) manufacturing system. It signals a cycle of replenishment for production and materials. This can be considered as a "demand" for product from on step in the manufacturing or delivery process to the next. It maintains an orderly and efficient flow of
materials throughout the entire manufacturing process with low inventory and work in process. It is usually a printed card that contains specific information such as part name, description, quantity, etc. In a Kanban manufacturing environment, nothing is manufactured unless there is a “signal” to manufacture. This is in contrast to a push-manufacturing environment where production is continuous.

**Poka Yoke**

Poka yoke is a Japanese term which means mistake proofing. To avoid (yokeru) inadvertent errors (poka). A poka yoke device is one that prevents incorrect parts from being made or assembled, or easily identifies a flaw or error. poka-yoke - 'mistake-proofing', a means of providing a visual or other signal to indicate a characteristic state. Often referred to as 'error-proofing', poke-yoke is actually the first step in truly error-proofing a system. Error-proofing is a manufacturing technique of preventing errors by designing the manufacturing process, equipment, and tools so that an operation literally cannot be performed incorrectly.

**Upper Management**

Within corporations, an upper manager is the person who must take responsibility for and is accountable for the success or failure of their particular operation. In large corporations, top executives must meet with other top executives to ensure that operations are being carried out in accordance with the organization's goals and policies. Plant managers, general managers, departmental managers, and executive officers are all part of the top executives who formulate the policies and directions of corporations and agencies. The fundamental objective that these executives must work towards is to ensure that their business units make a profit for their shareholders and owners. General managers and top executives work to ensure that their organizations meet these objectives and increase the shareholder's value.

The scope of high level executive's responsibilities depends greatly upon the size of the organization. In larger organizations, their duties may be highly specialized. For example, they may oversee managers of marketing, sales, purchasing, finance, personnel, etc. In a small firm the chief executive might be responsible for all or a number of these functions. Middle managers, in turn, direct the individual department's activities within the framework of the organization's overall plan. With the help of supervisory managers and their staffs, these managers oversee and motivate their workers to achieve the department's goals as rapidly as possible.