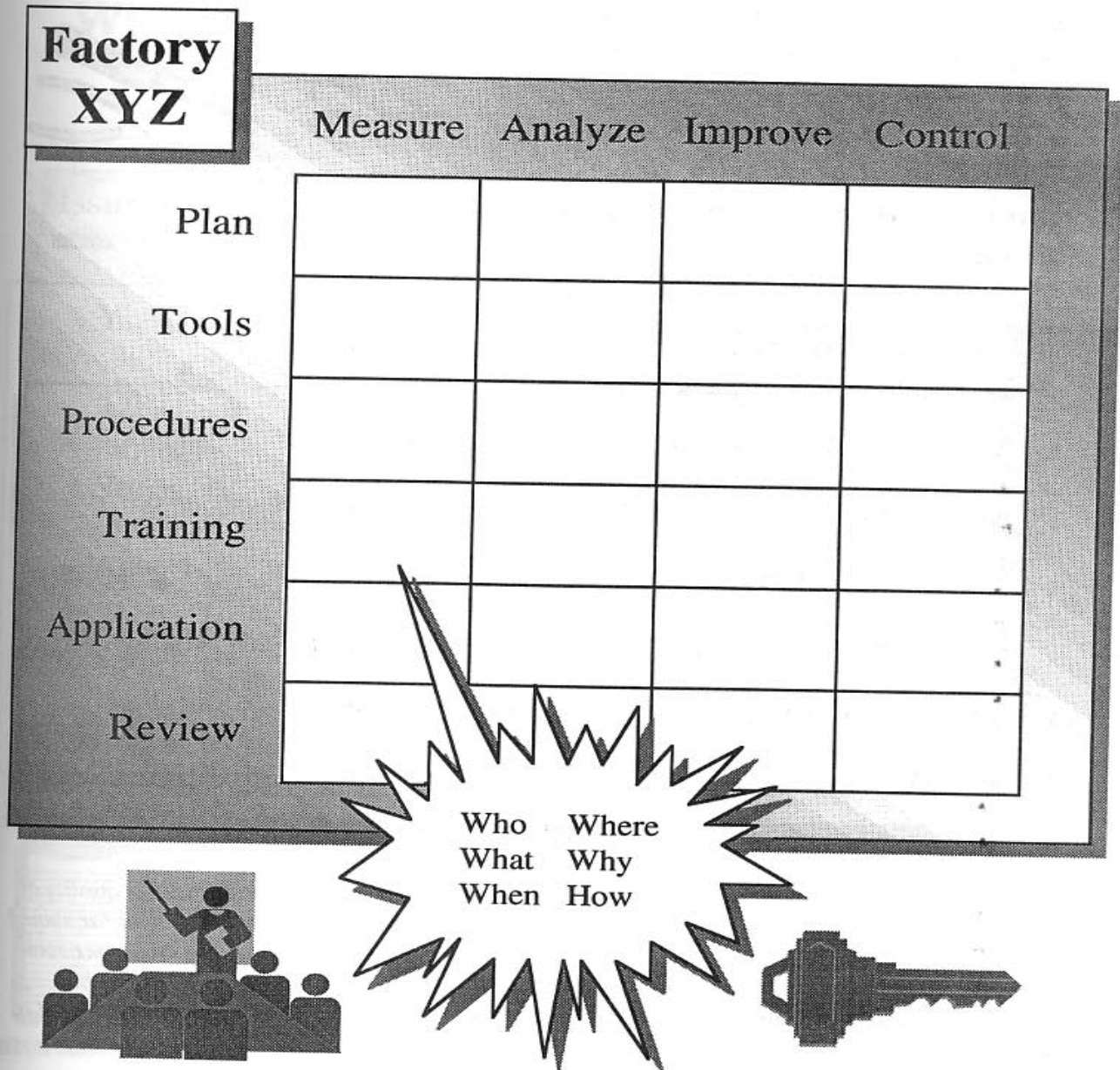
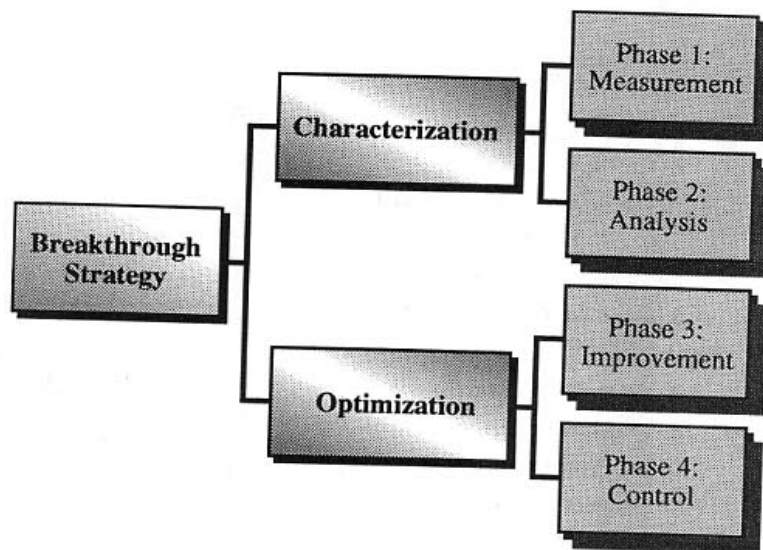
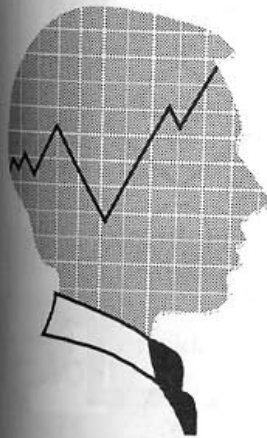


The Application Tactics



The Breakthrough Phases



Phase 1 (Measurement) This phase is concerned with selecting one or more product characteristics; i.e., dependent variables, mapping the respective process, making the necessary measurements, recording the results on process "control cards," and estimating the short- and long-term process capability.

Phase 2 (Analysis). This phase entails benchmarking the key product performance metrics. Following this, a gap analysis is often undertaken to identify the common factors of successful performance; i.e., what factors explains best-in-class performance. In some cases, it is necessary to redesign the product and/or process.

Phase 3 (Improvement) This phase is usually initiated by selecting those product performance characteristics which must be improved to achieve the goal. Once this is done, the characteristics are diagnosed to reveal the major sources of variation. Next, the key process variables are identified by way of statistically designed experiments. For each process variable which proves to be leverage in nature, performance specifications are established.

Phase 4 (Control) This phase is related to ensuring that the new process conditions are documented and monitored via statistical process control methods. After a "settling in" period, the process capability would be reassessed. Depending upon the outcomes of such a follow-on analysis, it may be necessary to revisit one or more of the preceding phases.