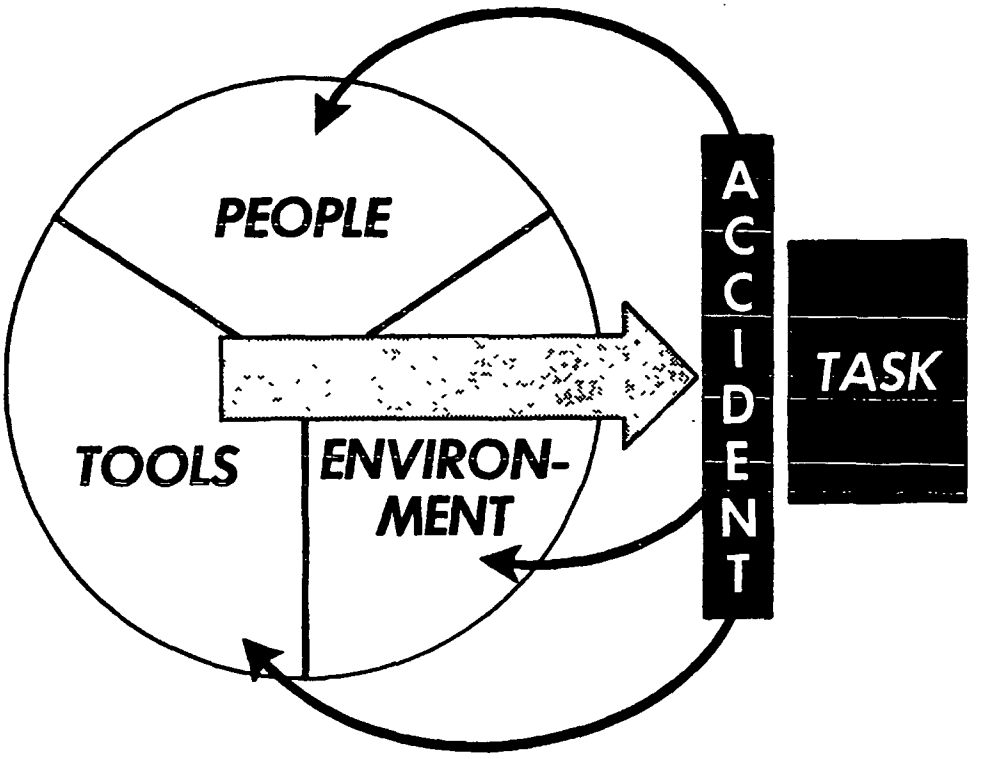


FIG 3-12 —A "system" is an orderly arrangement of COMPONENTS that are interrelated and act and INTERACT with one another to perform a TASK or function in a particular ENVIRONMENT An ACCIDENT results from deficiencies in PEOPLE, TOOLS, and/or ENVIRONMENT (most accidents have deficiencies in all three), and sometimes deficiencies in the TASK

### System Safety

Recent years have seen increased "system talk"—that is, discussion and exploration of system approaches to industrial accident prevention

Safety professionals will not only hear about these techniques, they will have to understand them, for many will be called on to find ways of implementing them And although complete "systems safety analysis" requires specially trained engineers and rather sophisticated mathematics, safety professionals will find that some knowledge of these techniques can be of direct benefit in helping codify and direct their accident prevention programs

Systems methods developed in the exacting aerospace field hold promise for all industrial safety professionals

Today, scientists can successfully orbit an astronaut and get him back home safely But yet we cannot reliably get the employee back home from the plant safely What's different in these two situations? The first difference is the amount of money spent on the orbit task The second difference is the systems approach to the orbit task, with the extremely high reliability and safety specifications required

A system analysis can clarify a *complex* process by devising a chart or model that provides a comprehensive, overall view of the process by showing its principal elements and the ways in which they are inter-related

Until recently, when a new aircraft was developed, it was first designed, then an experimental model was built, and finally it was