Involve Employee Groups. As subject matter experts in their work environments, the technicians and ramp workers are in the best position to identify and record threats and errors. Training for LOSA observations will give them the tools to capture the required information. The opportunity to step back from their daily roles and act as an observer also presents an opportunity to identify threats and errors that are not obvious.

Complements Existing Safety & QA Programs. LOSA is distinct from - but complementary to - other safety programs such as voluntary reporting systems (e.g., ASAP). Other programs generally rely on outcomes to generate data. By contrast, LOSA samples all activities in normal operations. During these operations, there may be some reportable events, but there will also be some near-events and, importantly, a majority of well-managed, successful operations.

Identify and Manage Threats. Observers note events in the operational environment (e.g., adverse weather, incomplete documentation, time pressure, and how they are managed by technicians). For example, understanding the extent to which certain procedures pose a problem for technicians or ramp workers, and capturing the strategies personnel adopt to deal with them, can lead an organization to develop special procedures or advisories to help its personnel manage the known threat.

Identify and Manage Errors. Observers note errors arising from within the organization's own operations and how they are managed (e.g., operational time pressure, dispatch errors, aircraft malfunction/minimum equipment list (MEL) items, and problems with interruptions, other technicians, and the ramp). For example, a high number of errors arising from dispatch or parts might signal that these departments require attention, that intergroup cooperation with technicians and ramp workers needs to be improved, or that procedures are inconsistent across departments.

Assess Training Effectiveness. Data provided by training programs can provide insight on whether training concepts are learned, but not whether they are actually practiced. A LOSA provides that operational information, which can be reviewed from a training perspective to understand which areas of training, if any, are not transferring successfully.

Check the Quality and Usability of Procedures. A LOSA provides insights about potential problems with procedures. For example, if five percent of observed technicians fail to properly Lockout/Tagout, there may be a problem with those technicians. However, if 50 percent of observed technicians make the same error, then the evidence suggests a problem with the procedure. Procedures can be ill-timed, too long, confusing or ambiguous, and/or compete for the technicians' attention with other more important activities.

Assess Safety Margins. Threats and errors that are mismanaged can result in undesired states, if sufficiently serious. A maintenance error that is not corrected before dispatch is an example of an undesired state, also known as an accident and incident precursor. A LOSA provides data about the prevalence and management of these incident and accident precursors. Thus, an organization acquires data about how close it is operating to the edge of the safety envelope, without crossing the boundary into an incident or accident.

Baseline for Organizational Change. LOSA results provide baseline and outcome measurement data against which organizational interventions can be measured. Using the medical metaphor, this would be akin to the patient deciding to cut out fried foods upon learning of a high cholesterol count. The next checkup reveals, in quantifiable form, whether this strategy has been effective in reducing cholesterol or whether other actions are necessary. Similarly, a follow up LOSA provides a new set of results that will show whether the organizational changes were effective in reducing certain threats, errors, and/or undesired states.