



Human Factors Applications

Our Services: Procedures Management

Summary

Effective procedures are key to **safe & efficient** Operations and Maintenance activities.

Suitably designed, laid-out and managed procedures:

- Promote consistent & reliable **human performance**;
- Assist identification & management of risks in **safety-critical activities** (*e.g. plant startup, high-risk maintenance tasks and emergency responses*);
- Aid **competency, work verification & training**
- Form an important part of a **Safety Management System**.

Formal risk assessments **frequently take credit** for procedures as barriers against major incidents. Poorly designed & implemented procedures can be difficult-to-follow, may induce shortcuts and increase the likelihood of incidents occurring – *a study of refinery incidents in the US concluded that procedures were the most common human factors root cause (accounting for 22% of all refinery incidents)*.

Our Services

With an emphasis on understanding tasks and involving users, HFA consultants have improved the **quality & consistency** of procedures on behalf of major clients. The procedures are then “owned” by the workforce, and properly implemented and maintained. This is accomplished using a systematic, human-centered approach that includes:

- Auditing key project phases (*startup, operations & maintenance, emergency situation management, etc.*) to identify **the tasks that require procedures**;
- Identifying **Critical** and **Non-Standard** tasks (*such as those required pre-startup and during maintenance turnarounds*);
- Developing **suitable & consistent formats** and **incorporation** into design guides;
- Development & delivery of training for **clients’ procedure-writing staff**;
- Writing steps based procedures on how tasks are **actually performed in the field**, ensuring steps are written to be clearly understood by users who may come from a **different working culture**;
- **Walking through** the procedure prior to it being used in a live situation on the job – to identify and allow the rectification of any issues found.

This approach achieves optimal usability, quality & consistency of the delivered procedures. Wider human performance aspects such as the working environment, stress & fatigue, communication & distraction are also addressed by HFA.

Realized Benefits

An improved procedure development and management process will yield:

- Procedures that are **fit-for-purpose**, resulting in better adoption and adherence;
- A **reduction in human errors** associated with procedures’ use such as:
 - Incorrect step execution;
 - Misunderstood / unclear operating constraints / limits;
 - “Irreversible” steps;
 - Skipped verification steps.
- Alignment with current operational practices, and;
- A means to **retain real operational knowledge**;
- Improved **training aids** for new and experienced operations staff.

Human Factors Applications has applied **practical knowledge** of procedure design for **many major clients**. We can effectively channel this experience to improve the implementation of procedures for **your** plant or facility.