A safe staffing assessment is a practical method used to assess the staffing levels in an organisation.

What is a safe staffing assessment?
A safe staffing assessment is a practical method developed by ENTEC on behalf of the Health and Safety Executive (HSE) which can be used to assess the staffing levels in an organisation and the impact on safety of any changes in operations staff. The method concentrates on the staffing requirements for responding to hazardous incidents and is focused on how staffing affects the reliability and timeliness of detecting incidents, diagnosing the causes and recovering the plant to a safe state.

The approach does not calculate a minimum or optimum number of staff, and any issues identified in the study are not necessarily indications that numbers of staff need to be increased; the solution may be to improve procedures, or layout of the control room workstations, for example.

The assessment process follows the methodology specified in the HSE’s ‘safe staffing arrangements’ document. Additional guidance is incorporated into the original methodology by the Energy Institute ‘User Guide’.

There are two aspects to the assessment:
- “Physical” assessments which are related to a particular hazardous scenario
- “Ladder” assessments which consider topics related to staffing and human factors

Both aspects focus on operations staff, especially control room and field technicians, but also involve shift supervisors, managers and other support staff. The assessment involves in-depth discussions with these staff using a structured question set.

The physical assessments consider response to a hazardous scenario, typically one that has been described in the site Control of Major Accident Hazards (COMAH) safety report. The team then uses a series of decision trees to investigate issues such as how the technicians will detect and diagnose the scenario, how communication occurs between the control room and the field, how additional support is organised, and what other activities the technicians could be involved with. Each tree has a pass / fail criterion.

The ladder assessments consider topics including subjects such as situational awareness, training and development, willingness to initiate recovery, and team working. There is a total of 9 topics which may be considered; sites may select the most relevant or use all of the topics. The assessment uses a “ladder” with a series of questions and a pass / fail benchmark.

Actions are prioritised according to the guidance, based on criticality (how important the action is) and complexity (the amount of effort, time / money etc. needed to complete the action). Alternative prioritisation methods could, of course, be used.

1 Assessing the safety of staffing arrangements for process operations in the chemical and allied industries. HSE Contract Research Report 348/2001
What we offer
ABB offers trained and experienced facilitators to lead safe staffing assessments in accordance with the published guidance. Assessments may be carried out to benchmark the organisation, or to assess proposed changes to staffing, including changes to organisational structure and numbers of staff in operations roles. ABB human factors support services are tailored to the specific requirements of each establishment and we can assist in scopeing the study as well as facilitating it. Before any study we offer an introductory presentation to familiarise the study team with the approach used.

Benefits
A safe staffing assessment provides a benchmark against best practice for staffing arrangements and covers a wide range of human factors topics, enabling the client to demonstrate a commitment to human factors in line with COMAH requirements.

The assessment may be used to demonstrate the organisation’s ability to respond to hazardous scenarios including detection and diagnosis of a developing incident as well as bringing the plant to a safe state and recovery and follow-up.

The topic-based discussions in the ladder assessments provide an in-depth look at management systems and procedures which support safe operations as well as control room factors such as layout of display screens, ease of information retrieval and the ability of technicians to gain a detailed view of the process operations.

Our experience of carrying out these studies is that the discussion usually highlights some areas for improvement that had not been previously identified by other studies such as HAZOPS (Hazard and Operability Study) or audits. For example, in a discussion about fatigue, whilst the company had a fatigue management policy, it transpired that shift swaps are not checked before they occur so an individual could be out of compliance with the policy.

A study can also be used to assess the impact of proposed changes to an organisation before they are implemented. This highlights any pitfalls in the proposed plan and enables them to be corrected before implementation. By involving staff who may be affected by the changes, it also provides a structured platform for robust challenge of the proposals and enables buy-in from the team.

Why ABB
ABB offers facilitators with extensive experience of operating plant as well as process safety and human factors, who can quickly understand the technical and human factors issues uncovered in the study.

Our process safety specialists share best practice gained from supporting operators across the process industries. They are part of a team with extensive experience in process safety topics and have a clear understanding of COMAH regulatory requirements and associated guidance.

Our facilitators are experienced study team leaders and enable to engage quickly and effectively with personnel involved in the study, enabling open discussions focused on improvement.