ABB Consulting’s criticality and vulnerability assessment is a structured and rapid assessment tool used to determine the importance or priority of plant areas, systems or equipment items.

There is never a shortage of problems to resolve, but there are always limitations on the resources available whether it be money, time or personnel. One of the most difficult questions that has to be answered is “Where do we focus our resources?”. This appears to be a simple question, but it is often very complex to answer due to a diverse set of drivers including safety, health and environment, production, customers and maintenance. Criticality and vulnerability assessments answer this question as well as how the risks are being managed and where the gaps are.

Our approach
The criticality and vulnerability assessment process establishes the relative priority of plant areas, systems and equipment items in a semi-quantitative manner using specially constructed word models and is carried out by a joint ABB / client team which works to:

− Identify the credible failure modes
− Assess the consequences
− Assess the likelihood of failure and the factors influencing it
− Identify actions to reduce the risk or criticality for the items

Deliverables from the process can be:

− SHE, production, customer and maintenance criticality
− Overall criticality
− Summary spreadsheets
− Action list spreadsheets
− Detailed reports for each item and failure mode

An assessment can be used to:

− Evaluate how well the risk of failure is being managed
− Assess and communicate the consequences and relative risk of failure from a SHE, customer, production and maintenance perspective
− Identify equipment with high risk or potentially high consequences of failure
− Identify actions to mitigate against failure or the effects of failure

Benefits

− Gaining an understanding of the risks associated with potential failures
− Focus the use of limited resources such as money, time and personnel to achieve maximum benefit
− Prioritise improvement and maintenance work
− Prioritise and eliminate shutdown work where time is limited

“A thorough methodology that has helped to identify which areas are critical and need urgent attention”
Why use ABB

ABB brings a vast amount of experience in designing and facilitating studies from numerous industry sectors to ensure that they deliver maximum benefit for the resources utilised.

ABB also takes a flexible approach and where necessary adapts the standard methodology and assessment criteria to suit a particular client’s situation to ensure that the specific issue is fully considered.

For further information please contact:

ABB Consulting
Daresbury Park
Daresbury
Warrington
Cheshire
WA4 4BT
United Kingdom
Phone: +44 (0)1925 741111
Fax: +44 (0)1925 741212
E-Mail: contact@gb.abb.com

www.abb.com/consulting

ABB Consulting provides technical and engineering services to improve performance in the areas of compliance, operations and engineering to customers in the chemical, petrochemical, oil & gas, power, pharmaceuticals, metals and consumer industries worldwide.