ABB’s criticality and vulnerability assessment is a structured and rapid assessment tool used to prioritise 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 they be money, time or personnel.

One of the most difficult questions that has to be answered on plant 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, customer demands and maintenance.

Criticality and vulnerability assessments answer this question while looking at how the risks are being managed and where the gaps are.

“‘A thorough methodology that has helped to identify which areas are critical and need urgent attention’

What we offer
ABB’s 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. It is carried out by a joint ABB / client team which, for each item, works to identify:

- The credible failure modes
- The various realistic consequences of these failures
- Likelihood of each failure and the factors influencing it
- Actions to reduce the risk or criticality for the items

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 prevent or mitigate the effects of failure
Benefits
- Gaining an understanding of the risks associated with potential failures and of the relative importance of plant systems or equipment
- The ability to justify focusing limited resources - money, time and personnel - on high criticality items to achieve maximum benefit in areas such as reliability improvement, or shutdown work scope management

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

ABB also takes a flexible approach, adapting the standard methodology and assessment criteria to ensure that a specific client issue is fully considered.

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Additional benefits of criticality and vulnerability analysis.

- Gaining an understanding of the risks associated with potential failures and of the relative importance of plant systems or equipment
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