



**Figure 12-2: Probability of Failure**

Appreciation of risk within the utility allows the asset manager to assess priorities and set investment plans to minimize probabilities of asset or service failure.

		1	2	3	4	5
Consequences (Impact/Severity)	5					
	4					
	3					
	2					
	1					
		Likelihood of Event				

**Figure 12-3: Assessment of Risk Matrix**

Another way to look at risk is to separate the consequence of an event from its likelihood. In that way, events (such as asset failures) that have little or no consequence can be treated differently from those that do. One such method based on this principle assesses the 'criticality' of an asset at any level from a zone through to a component such as a pump from the consequence of its failure. Only those critical assets for which asset failure is a significant factor are examined further in terms of planned maintenance and condition analysis. Non-critical assets may be allowed to fail.

Data associated with asset failures, condition and performance horizons and similar aspects is therefore of prime importance when dealing with risk. Analyses of failure rates give statistical data to back up failure probabilities. Condition is usually important for critical assets.

Risk is basically the combination of the consequence of an event and its probability. For example the risk associated with a particular asset failure mode is the outcome of that failure combined with the likelihood of it happening.