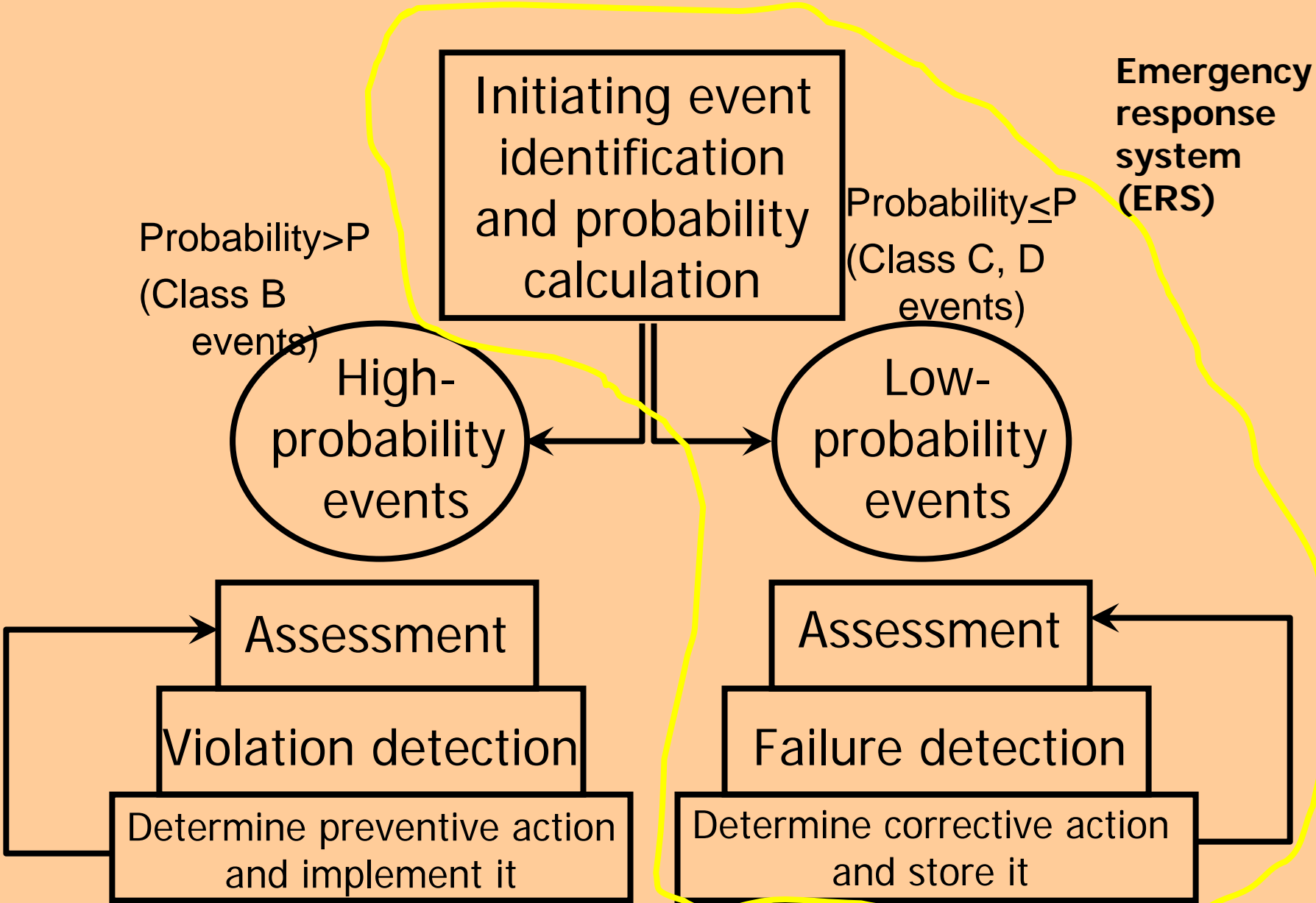
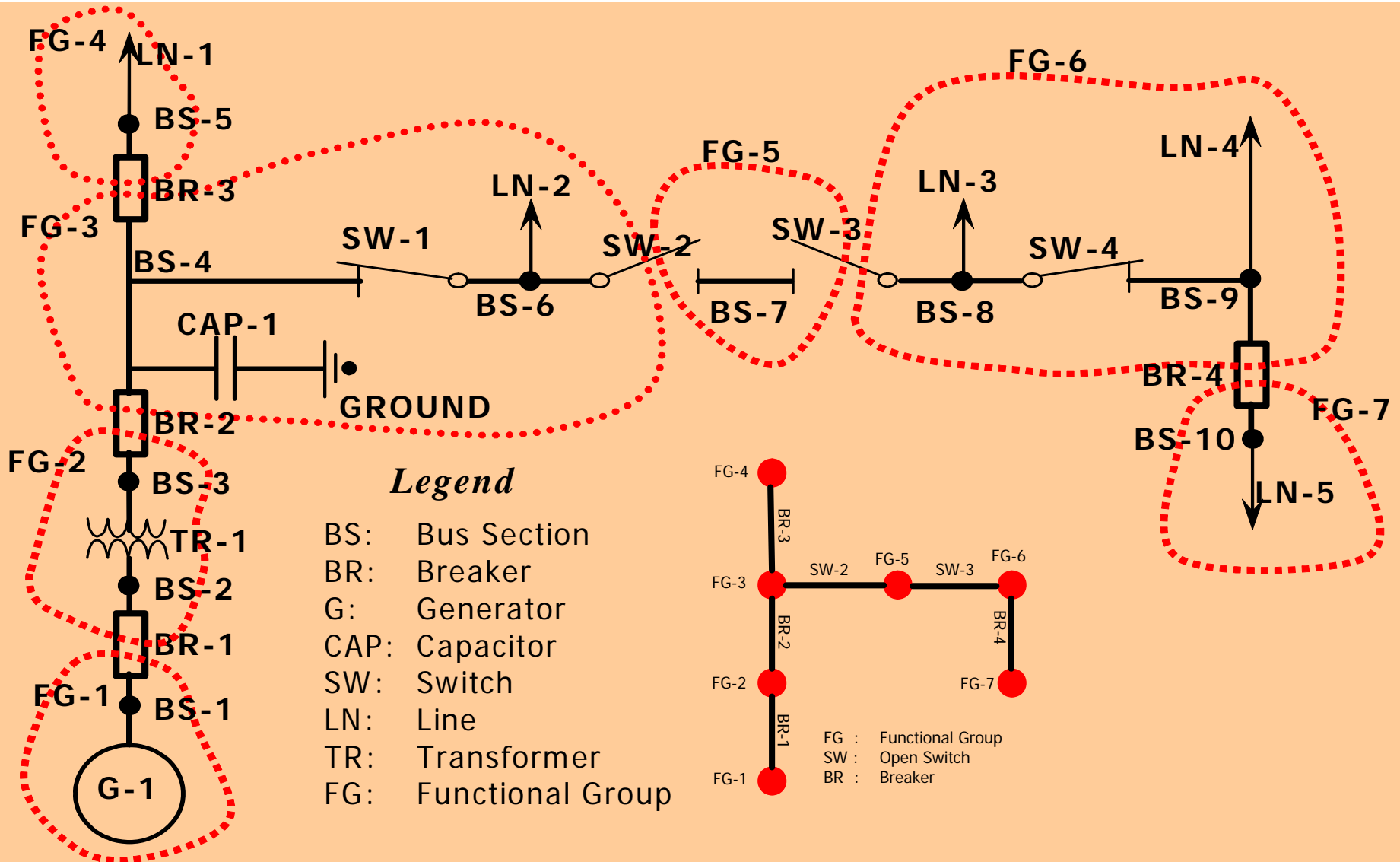


Preventive/corrective action paradigm



Functional group decomposition



Initiating events & probabilities

Functional group (FG) decomposition provides for efficient initiating event identification and probability computation.

Each FG defines initiating event of losing all components in the FG

$$P_{removal}^{FG_i} = \sum_{C_j \in FG_i} P_{failure}^{C_j}$$

Each breaker & 2 FGs it joins defines initiating event of losing all components in both FGs

$$P_{fault\ stuck}^{B_{ij}} = \left(P_{fault}^{FG_i} + P_{fault}^{FG_j} \right) \times P_{per\ demand}^{B_{ij}}$$

Each FG defines initiating event of losing all components in FG plus those lost due to inadvertent tripping.

$$P_{inadvertent}^{FG_j / FG_i} = \frac{\Pr(FG - j\ trips \cap FG - i\ trips)}{\Pr(FG - i\ trips)}$$

Mid Term Simulator

