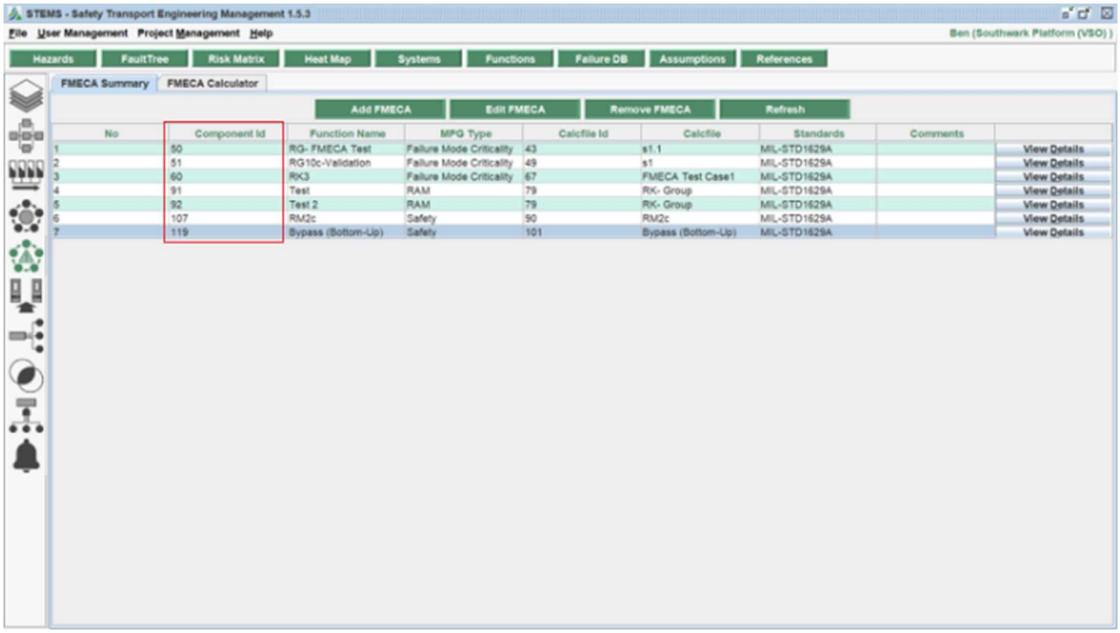
FMECA Summary

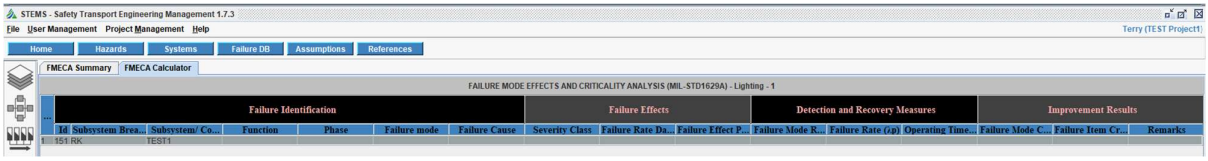
The Failure modes, effects, and criticality analysis (FMECA) App is an online technique used by engineers & technologists to identify potential failures in systems and equipment. Once you have identified the failure modes, you can determine their effects and prioritise them based on how criticality.

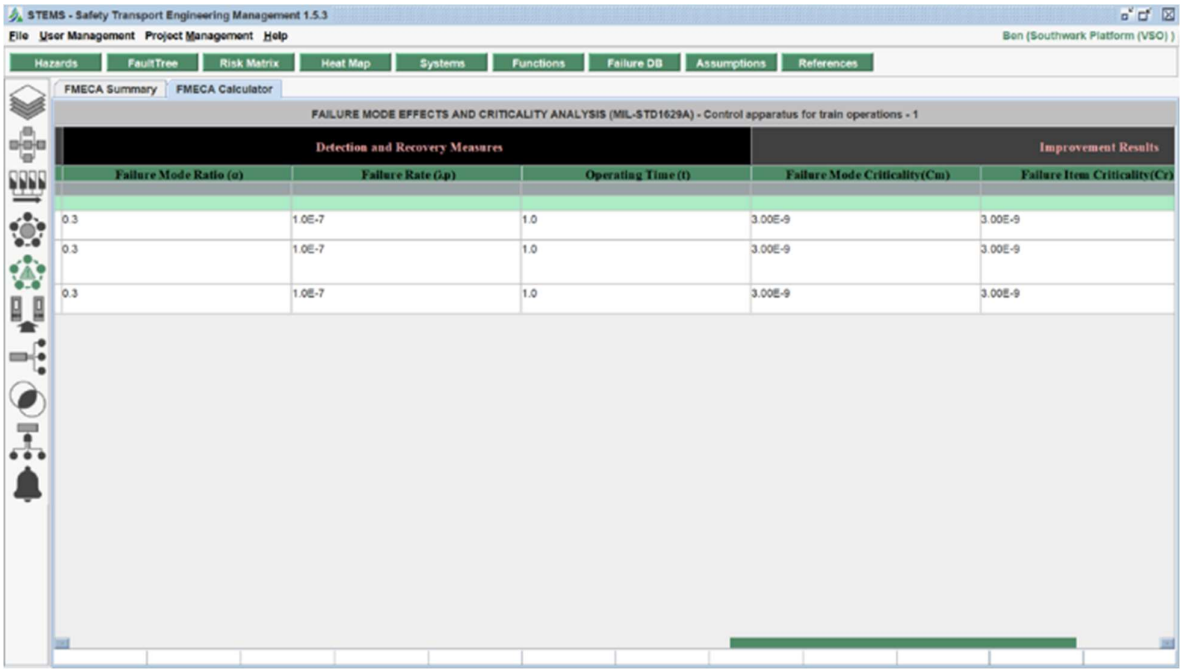
Here are some screenshots from the software:

FMECA INPUT SUMMARY TAB

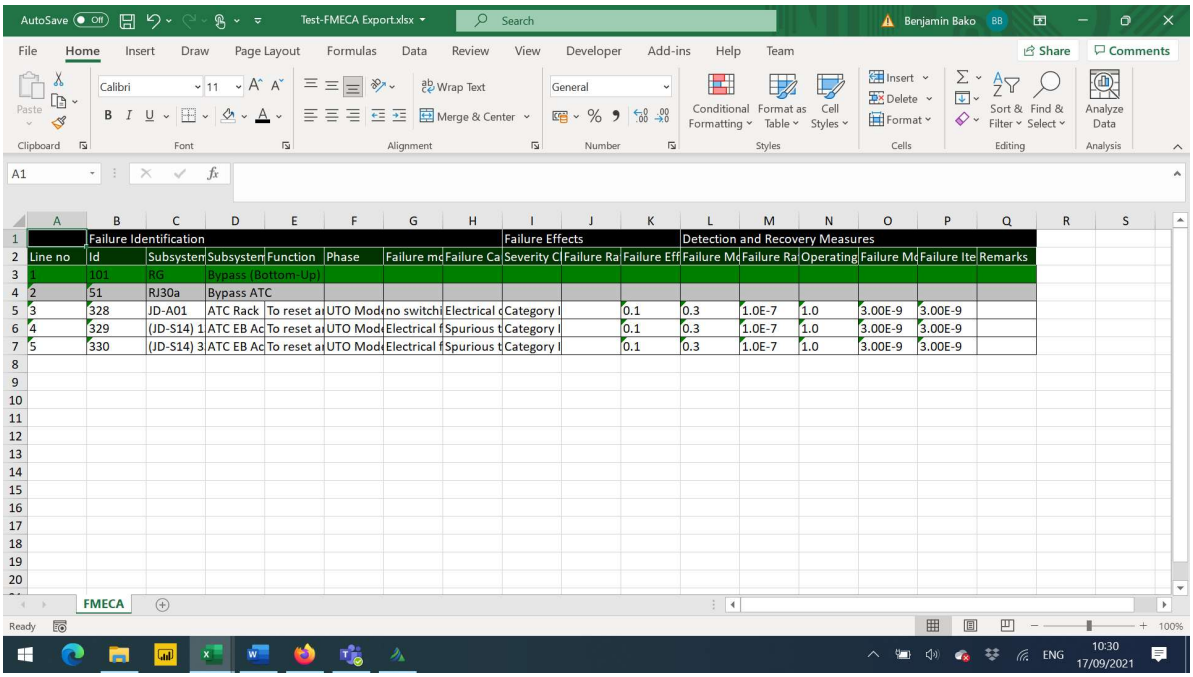



FMECA CALCULATOR (extract):

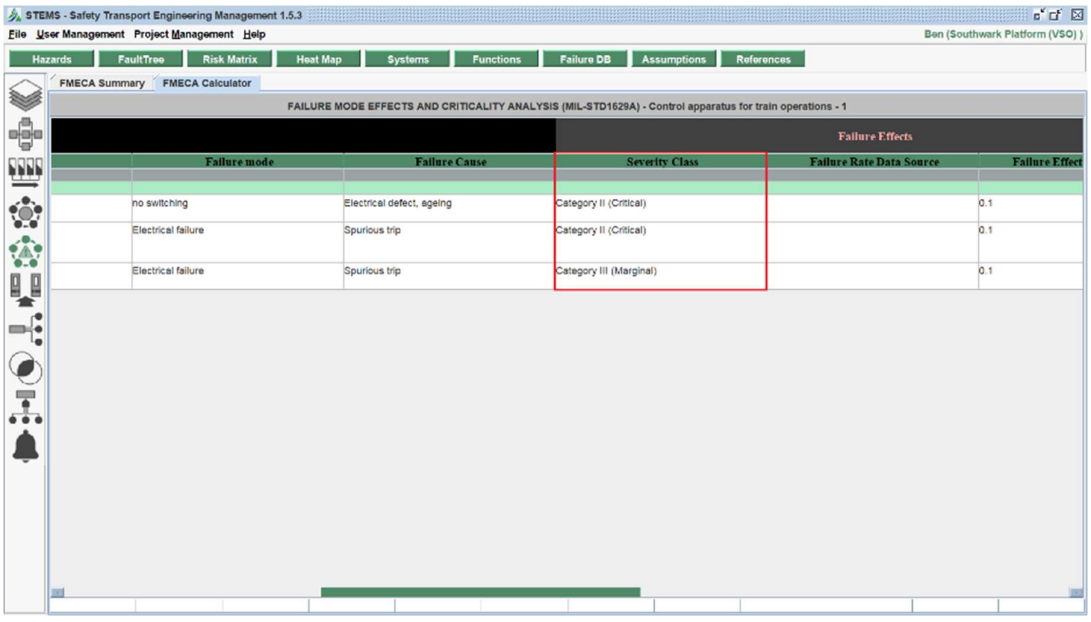


EXAMPLE OUTPUT FILE



| | Failure Identification | | | | | | | | Failure Effects | | | Detection and Recovery Measures | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Line no | Id | Subsystem | Subsystem | Function | Phase | Failure mo | Failure Ca | Severity C | Failure Ra | Failure Eff | Failure Mo | Failure Ra | Operating | Failure Mo | Failure Ite | Remarks |
| 1 | 101 | RG | Bypass (Bottom-Up) | | | | | | | | | | | | | |
| 2 | 51 | RJ30a | Bypass ATC | | | | | | | | | | | | | |
| 3 | 328 | JD-A01 | ATC Rack | To reset a | UTO Mod | no switchi | Electrical c | Category I | | 0.1 | 0.3 | 1.0E-7 | 1.0 | 3.00E-9 | 3.00E-9 | |
| 4 | 329 | (JD-S14) 1 | ATC EB Ac | To reset a | UTO Mod | Electrical f | Spurious t | Category I | | 0.1 | 0.3 | 1.0E-7 | 1.0 | 3.00E-9 | 3.00E-9 | |
| 5 | 330 | (JD-S14) 3 | ATC EB Ac | To reset a | UTO Mod | Electrical f | Spurious t | Category I | | 0.1 | 0.3 | 1.0E-7 | 1.0 | 3.00E-9 | 3.00E-9 | |



FAILURE MODE EFFECTS AND CRITICALITY ANALYSIS (MIL-STD1629A) - Control apparatus for train operations - 1

| | Failure Effects | | | | |
|---|---|---|---|---|---|
| | Failure mode | Failure Cause | Severity Class | Failure Rate Data Source | Failure Effect |
| | no switching | Electrical defect, ageing | Category II (Critical) | | 0.1 |
| | Electrical failure | Spurious trip | Category II (Critical) | | 0.1 |
| | Electrical failure | Spurious trip | Category III (Marginal) | | 0.1 |