

# STEPS TO IDENTIFY PROCESS CAPABILITY



## TOPIC: STEPS TO IDENTIFY PROCESS CAPABILITY – DPMO METHOD

### STEP 01 – COMPUTE DEFECTS PER OPPORTUNITY

$$DPO = D / (O * U)$$

D = TOTAL NUMBER OF DEFECTS

O = OPPORTUNITY FOR DEFECTS PER UNIT

U = TOTAL NUMBER OF UNITS

### STEP 02 – COMPUTE DPMO (DEFECTS PER MILLION OPPORTUNITIES)

$$DPMO = 1,000,000 * DPO$$

$$D = 1,000,000 * D / (O * U)$$

### STEP 03 – LOOK UP DPMO IN SIGMA CONVERSION TABLE

# STEPS TO IDENTIFY PROCESS CAPABILITY



## TOPIC: SIGMA CONVERSION TABLE

| Sigma | DPMO     | Sigma | DPMO     | Sigma | DPMO   |
|-------|----------|-------|----------|-------|--------|
| 0.1   | 919243.3 | 2.1   | 274253.1 | 4.1   | 4661.2 |
| 0.2   | 903199.5 | 2.2   | 241963.6 | 4.2   | 3467   |
| 0.3   | 884930.3 | 2.3   | 211855.3 | 4.3   | 2555.2 |
| 0.4   | 864333.9 | 2.4   | 184060.1 | 4.4   | 1865.9 |
| 0.5   | 841344.7 | 2.5   | 158655.3 | 4.5   | 1350   |
| 0.6   | 815939.9 | 2.6   | 135666.1 | 4.6   | 967.7  |
| 0.7   | 788144.7 | 2.7   | 115069.7 | 4.7   | 687.2  |
| 0.8   | 758036.4 | 2.8   | 96800.5  | 4.8   | 483.5  |
| 0.9   | 725746.9 | 2.9   | 80756.7  | 4.9   | 337    |
| 1     | 691462.5 | 3     | 66807.2  | 5     | 232.7  |
| 1.1   | 655421.7 | 3.1   | 54799.3  | 5.1   | 159.1  |
| 1.2   | 617911.4 | 3.2   | 44565.4  | 5.2   | 107.8  |
| 1.3   | 579259.7 | 3.3   | 35930.3  | 5.3   | 72.4   |
| 1.4   | 539827.9 | 3.4   | 28716.5  | 5.4   | 48.1   |
| 1.5   | 500000.0 | 3.5   | 22750.1  | 5.5   | 31.7   |
| 1.6   | 460172.1 | 3.6   | 17864.4  | 5.6   | 20.7   |
| 1.7   | 420740.3 | 3.7   | 13903.4  | 5.7   | 13.4   |
| 1.8   | 382088.6 | 3.8   | 10724.1  | 5.8   | 8.5    |
| 1.9   | 344578.3 | 3.9   | 8197.5   | 5.9   | 5.4    |
| 2     | 308537.5 | 4     | 6209.7   | 6     | 3.4    |