Understanding the Use of Process Capability Ratios

- **6σ: 0.2 DPMO**
  - Short Term
  - DPO
  - DPU
  - DPMO

- **6σ: 3.4 DPMO**
  - Long Term

- **6σ: Cp=2.0**
  - Short Term
  - Process Capability
  - Design Requirement
  - LSL ↔ USL
  - Cpk

- **6σ: Pp=1.33**
  - Long Term
  - Continuous Data
  - Process Capability
  - Process/Design Centering
  - LSL ↔ USL
Long Term Variation, including the shifts and drifts in the process, infringes on design margin
The Short Term distribution is “shifted” +1.5σ to simulate the +3σ value of the long term process distribution.
The +3σ value of the long term distribution has the same tail area probability for a defect as the +1.5σ “shifted” short term distribution.