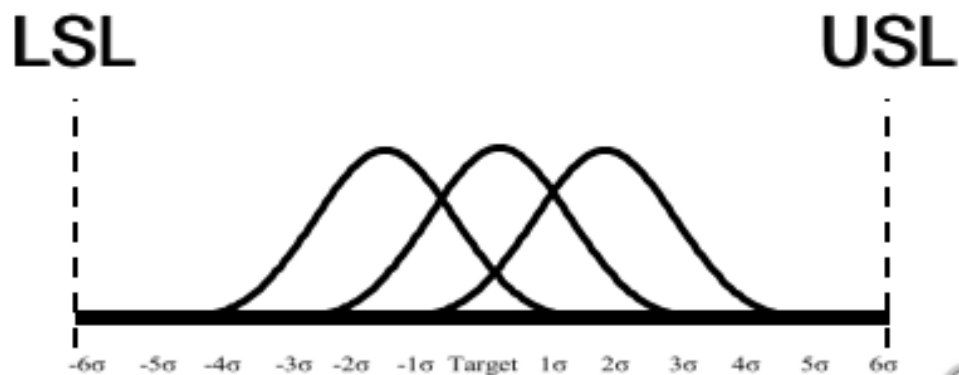


Significance of Six Sigma

Six Sigma represents a stretch goal of six standard deviations from the process mean to the specification limits when the process is centered, also allowing for a 1.5 sigma shift toward either specification limit. This represents a quality level of 3.4 defects per million.



When comparing short term to long term performance in variation, one should expect to see a 1.5 sigma shift. Although adopters of the six sigma philosophy may struggle to reach a level of variance reduction equivalent to 3.4 defects for every 1 million opportunities, intermediate gains can be realized to reduce variation significantly.

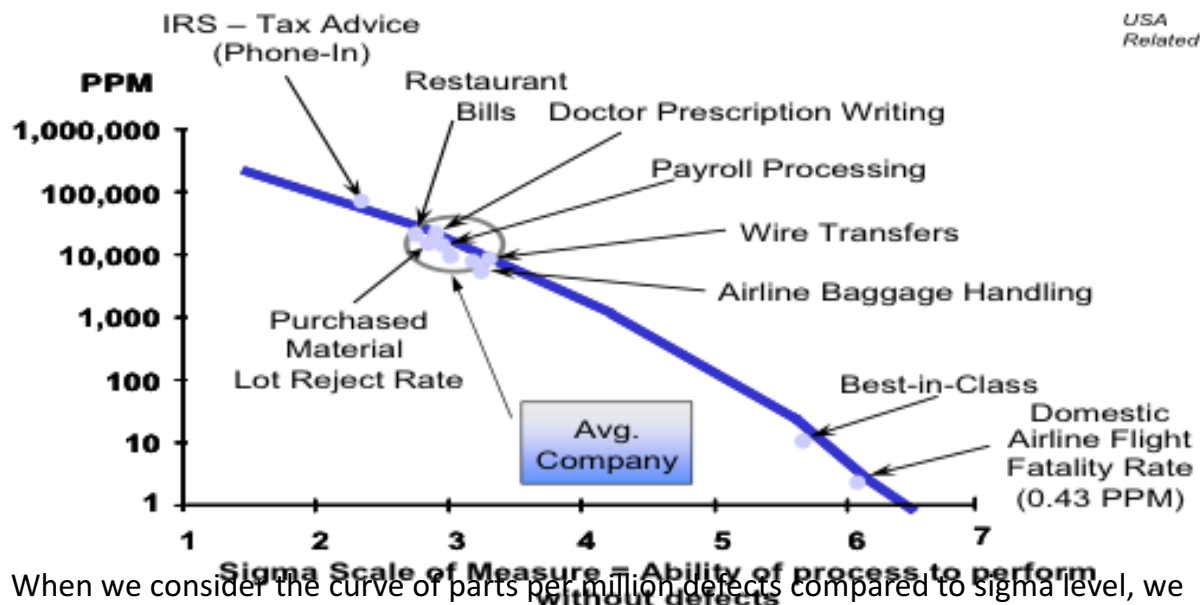
Significance of Six Sigma

Sigma Level	PPM
6 σ	3.4 PPM
5 σ	233 PPM
4 σ	6,210 PPM
3 σ	66,810 PPM
2 σ	308,770 PPM
1 σ	691,462 PPM



In terms of sigma level, huge leaps in reduction of defects can be realized as we move from one sigma level to the next.

Significance of Six Sigma



When we consider the curve of parts per million defects compared to sigma level, we see that many processes commonly used daily are ripe for improvement. A best in class organization will consistently deliver products and services in the realm of six sigma. As you can imagine, the financial and customer perception risks to the company can be staggering at lower sigma levels.

Significance of Six Sigma

99% defect-free

At least 200,000 wrong drug prescriptions each year

Two botched landings/day

5,000 incorrect surgical procedures/ week

20,000 lost articles of mail/hr

Unsafe drinking water for 15 minutes each day

No electricity for 7 hours each month

99.99966% defect-free

⇒ 68 wrong drug prescriptions/year

⇒ One botched landing every FIVE YEARS

⇒ 1.7 incorrect surgical procedures/week

⇒ Seven lost articles of mail/hour

⇒ One unsafe minute of drinking water every seven months

⇒ No electricity for 7 hours every 5 years

The value can also be quantified in terms of substantial reductions in errors.

At least 200,000 wrong drug prescriptions each year to 68 wrong drug prescriptions each year

Two short or long landings at major airports each day to One short or long landing at major airports each FIVE YEARS

5,000 incorrect surgical procedures every week to 1.7 incorrect surgical procedures every week

20,000 lost articles of mail per hour to Seven lost articles of mail per hour

Unsafe drinking water for almost 15 minutes each day to One unsafe minute of drinking water every seven months

No electricity for almost 7 hours each month to No electricity for almost 7 hours every 5 years

From a three sigma to six sigma level, this is a reduction from 66,810 defects for every one million opportunities to 3.4 defects for every 1 million opportunities.

