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Quality-Navigation™ Technology

**Navigating Performance Quality
with One Practical Standard Chart**

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Overview

- Effective total quality management requires continuous performance monitoring on charts
- Comparing Statistical Process Control charts with Quality-Navigation™ Standard Celeration Chart
- Directly seeing frequency, celeration, bounce and projecting future performance courses
- Locating exemplars and directly seeing PIPs
- Spotting early warnings of quality decrease
- Describing performance improvements
- Chart-Stat™ and chart sets for organizational levels

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**Statistical Process Control
Requires Four Charts**

- Raw performance frequencies converted to four (\bar{X} barS, \bar{X} barR, P and C) charts
- Quality control decisions
- Project outcome value _____
- Project outcome day __ Mo__ Yr__
- Which process has greatest PIP?
- What is agreement in audience?

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**Quality-Navigation™
Requires one Standard Chart**

- Raw performance frequencies directly recorded on one Standard Celeration Chart
The slope (corner to corner x2) is the standard
- Quality control decisions
- Project outcome value _____
- Project outcome day __ Mo__ Yr__
- Which process has greatest PIP?
- What is agreement in audience?

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**Directly Seeing Size of
Frequency, Celerations, and Bounce**

- Frequencies on multiply scale up left from 1 to 1,000,000 per day, week, month, year
- Corner to corner is x 2 (doubling) every celeration period - dark vertical lines (per week, month, 6 months, or 5 years)
- Bounce is usually x2 or x3 (width of pencil)

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**Projecting Future Performance Courses
and Outcomes**

- Frequencies accelerate and decelerate by straight lines on the SCC.
- Freehand or focused celeration lines forecast better than least square statistical lines.
- A course is projected by drawing lines parallel to the celeration line enclosing all the frequencies
- The up-bounce equals the down-bounce and total-bounce stays the same as frequency changes
- 1 min. on back list advantages of Standard Charting
- 1 min. share your written list with your neighbor

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Locating Performer and Job Exemplars and Directly seeing PIPs

- The distance the highest frequency is above the middle of the course is a factor, it is the Performance Improvement Potential (PIP).
- Any frequency a half bounce away from the edge of the course, would happen by chance less than 1 out of 1,000 times.
- Any frequency a total bounce away from the edge of the course, would happen by chance less than 1 out of 100,000 times.

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Spotting Early Warnings of Quality Decrease and Directly Seeing Quality Improvement

- A jump-up or turn-up in defective frequencies announces a broken or weakening process part
- Diverging bounce in either accepted or defective frequencies warns of system breakdown
- Exceptionally high occasional defective frequencies warn of random error in performer or process
- Quality improvement is increasing space between accepted and defective frequencies

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Describing Improvements over Projections Produced by Work Place Changes

- Jump-up, No Jump, Jump-down
- Turn-up, No Turn, Turn-down
- All are quantified as factors for example:
Jump-up x4 and turn up x2.
- About 1/3 of the published performance charts have counter-turns,
 - Jump-up and Turn-down
 - Jump-down and Turn-upmeaning effect will disappear in time.

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Standard Celeration Chart Sets for Performer / Job, Process, and Organization

- Daily Charts - Performer/Job quality monitoring
- Weekly Charts - Process quality monitoring
- Monthly Charts - Process and Organizational monitoring
- Yearly Charts - Organizational and National monitoring
- Corner to Corner on all charts is x2 (doubling) every Celeration Period
- 1 min. on back list elements of Quality-Navigation™
- 1 min. share your written list with your neighbor

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Descriptive and Inferential Statistics done with Chart-Stat™ on Chart

- All statistics are multiply (geometric rather than arithmetic mean) and non-parametric
- All are graphic, done completely on the chart
- Medians, middles, bounces and spreads
- Focused and free-hand celeration lines
- Significance of outlying frequencies
- Median tests with Fisher's exact probability
- Co-bounce rather than correlations

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Review and Summary

- 1 min. on back list charting solutions for your clients (counts per minute, hour, shift, day, week, month, or year)
- 1 min. share your written list with your neighbor
- Care enough to chart!

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