



# 360° REFINED

TECHNICAL MANUAL



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## INTRODUCTION

**360° Refined** - 360° Refined is a compilation of the skills that matter most for the development of new and seasoned leaders. Our aim in developing 360° Refined was to provide a substantive, valid, and intuitive assessment of leadership skills that is readily available to the public. It is based on the prevailing skills identified in leadership research to contribute to overall leadership performance. We offer 360° Refined in this online platform offering customizable labels for rater groups (supervisor, direct reports, peers, self, other). We appreciate your interest in our assessment and hope you find this Technical Manual useful.

### ASSESSMENT AUTHORS:

**Dr. Travis Bradberry and Dr. Jean Greaves** are the founders of TalentSmart the leading provider of emotional intelligence tests, products, training, coaching and consulting. Their established reputation in the field of leadership development includes coauthorship of the Preferred Leader Assessment™ with Ken Blanchard, the best selling business author of all time and coauthor of *The One Minute Manager*®, the bestselling *Emotional Intelligence 2.0* and the *Emotional Intelligence Quick Book*, and the TalentSmart EQ training program.

Their Emotional Intelligence Appraisal is used by more than half of Fortune 500 companies, all three branches of US government, and organizations of all sizes from virtually every industry.

Their research has been featured by The Harvard Business Review, Newsweek, MSNBC, Forbes, Fortune, The Washington Post, and major television and radio outlets including ABC, CBS, NBC, NPR, and FOX.

Dr. Bradberry holds a dual Ph.D. in clinical and industrial organizational psychology from the California School of Professional Psychology and a B.A. in psychology from the University of California San Diego.

Dr. Greaves holds a Ph.D. in industrial organizational psychology from the California School of Professional Psychology and a B.A. in psychology from Stanford University.

**The TalentSmart Research Team** is composed of graduate trained scientists who specialize in statistics and industrial organizational psychology. This team is integral to the rigorous and continual research and validation that stands behind the Emotional Intelligence Appraisal test.

# INTRODUCTION

## DEVELOPMENT OF 360° REFINED

360° leadership skill assessments are frequently long and cumbersome. They often exceed 100 questions, and this makes the assessment process a chore for managers (Coates, 1998; Waldman, Atwater & Antonioni, 1998). 360° Refined alleviates this problem as an assessment that measures the 22 leadership competencies critical to job performance, without unnecessary length for statistical validity and reliability.

## THEORETICAL FOUNDATIONS

360° Refined was designed based upon an extensive review of the literature relating to leadership behavior, performance, and competency development. The competencies selected were drawn from leadership research and literature. The core elements of leadership were those competencies well researched over decades (strategy, action and results) as well as newer, important leadership concepts (such as organizational justice and emotional intelligence). The literature review provided the opportunity to identify which behaviors are fundamental to excellent leadership performance. 360° Refined is designed to measure seven different fundamental aspects of leadership behavior.

## SURVEY MODEL

360° Refined provides scores for 7 different skill groups made up of 22 leadership skills. Three of these skill groups are considered to be the mainstays of leader performance, or Core Leadership. The other four skill groups, or Adaptive Leadership, take a leader's personal and organizational performance to the next level.



# INTRODUCTION

## SURVEY MODEL, CONTINUED

**Core Leadership** is what you do as a leader. The three skill groups that comprise Core Leadership are:

- 1. Strategy:** Leaders who take their workforce and organization in new directions have vision, acumen, courage to lead and planning skills.
- 2. Action:** Effective leaders are skilled decision makers, communicators and are able to mobilize others to make progress towards results.
- 3. Results:** Leaders who consistently reach their goals are able to take and stand by calculated risks, stay focused, do what it takes, and constantly adapt to uncertainty and change.

**Adaptive Leadership** is who you are as a leader. The four skill groups that comprise Adaptive Leadership are:

- 1. Emotional Intelligence(EQ):** Leaders with EQ skills are able to understand and manage their emotions productively, as well as understand those around them and manage their relationships well.
- 2. Organizational Justice:** Just leaders establish a trusting relationship with a committed workforce through fair decision making, concern for the welfare of those they lead, and open sharing of information.
- 3. Character:** Leaders who inspire admiration and support from others model integrity by melding ethics and values into action, are credible and can be counted on, and use differences between people to maximize contributions.
- 4. Development:** Strong leaders pursue lifelong learning about themselves and their environment to develop along many dimensions and provide those who work for them similar opportunities.

# INTRODUCTION

## RATING SCALE, ADMINISTRATION TIME AND SURVEY FORMATS

360° Refined questions are measured on a 6-point Likert-type scale. The frequency with which an individual demonstrates behaviors related to a skill is the best measure of that skill. Respondents are requested to think about how often the person being rated demonstrates the skill across situations. The anchors for each of the six rating options are:

- 1-Never
- 2-Rarely
- 3-Sometimes
- 4-Usually
- 5-Almost Always
- 6-Always

The average administration time for the 360° Refined is 15-20 minutes. This instrument uses an on-line multi-rater method to capture a global score through the combination of responses from coworkers. This score is compared to self-scores to yield a gap analysis and an understanding of differences in self-other perception. The 75 core survey items plus four open-ended questions provide others the opportunity to elaborate on responses. This assessment also includes a complete e-Learning and Goal Tracking system based upon the user's unique leadership score profile.

# PSYCHOMETRIC PROPERTIES

## DESCRIPTIVE STATISTICS

Descriptive statistics were calculated for each measure and subscales of the 360° Refined in the validity study, and are presented below:

**Descriptive Statistics for the Measures and Subscales in 360° Refined**

<b>Measure</b>	<b># of Items</b>	<b>Mean</b>	<b>Std. Dev</b>	<b>Min/Max</b>
360 ° Refined™	75	3.88	.51	2.65/5
Core Leadership	37	3.9	.54	2.6/5
Strategy	10	3.86	.57	2.44/5
Action	15	3.95	.58	2.54/5
Results	12	.93	.58	2.42/5
Adaptive Leadership	38	3.90	.59	2.42/5
Organizational Justice	10	3.74	.61	2.22/5
Decision Fairness	4	3.77	.63	2/5
Information Sharing	3	3.68	.71	2/5
Outcome Concern	3	3.78	.72	2/5
Emotional Intelligence	12	3.88	.61	2.08/5
Self-Awareness	3	3.55	.79	1/5
Self-Management	3	3.85	.78	1.67/5
Social Awareness	3	3.71	.84	1.67/5
Relationship- Management	3	3.93	.66	2.33/5
Character	9	4.09	.59	2.67/5
Development	7	3.89	.66	2.08/5

# PSYCHOMETRIC PROPERTIES

## FACE AND CONTENT VALIDITY

Content development and validation of the items for the leadership competency model used in the 360Refined instrument began in 2000, with qualified assessment experts developing a pool of survey questions to measure the skills most critical to leader job performance. The survey authors used an iterative process of writing draft items and reworking them to fit what is “necessary and sufficient” (no more and no less than what covers the elements of that skill). Once the set of items met the face validity criteria, they were presented to subject matter experts. Subject matter experts directly involved with item writing included Ph.D. and Master’s trained industrial/organizational psychology experts as well as business people with management experience. Items that did not meet the face validity criteria were deleted from the instrument.

Consistent with TalentSmart’s proprietary method of creating assessments, we eliminated unnecessary questions by avoiding the use of many, specific behavioral questions to measure a single skill. Instead, the assessment questions measure the sufficient behavioral outcome needed to adequately assess a particular skill. These items are designed to measure the impact that specific behaviors have in the workplace. For example, the competency titled ‘communication’ does not ask questions about every specific method of communication (presentations, written documents, e-mail, etc.) that a manager may use in the workplace. Rather it assesses the impact of a manager’s ability to communicate through coworkers’ staff and supervisor perceptions of the manager’s communication behaviors. Thus, 360Refined questions are about results and outcomes rather than effort and activity.

# PSYCHOMETRIC PROPERTIES

## RELIABILITY

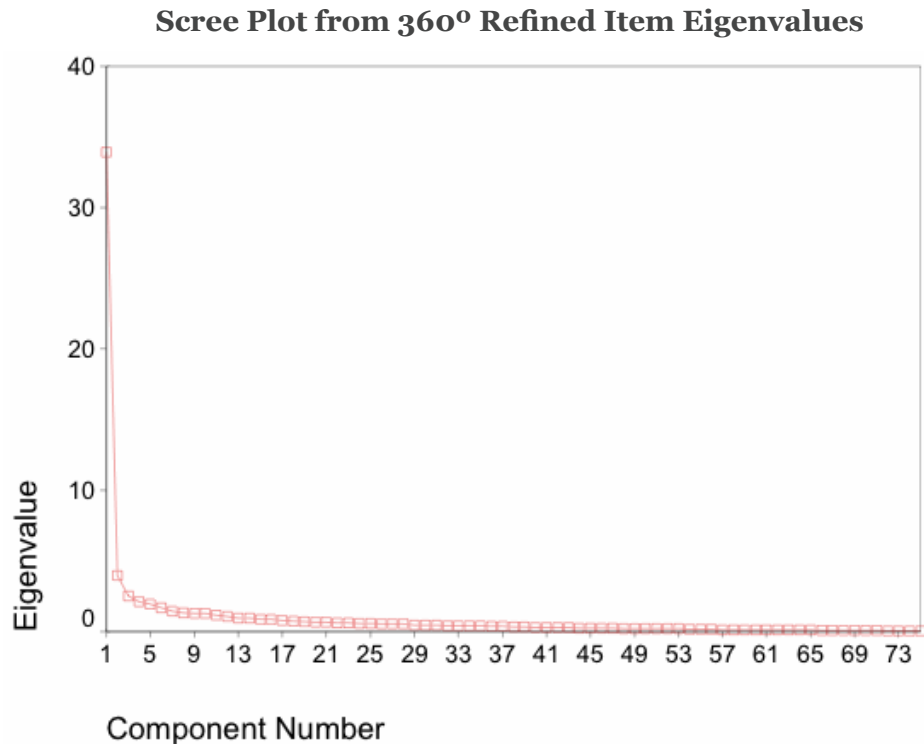
To assess the reliabilities for each subscale, coefficient alphas were calculated and are presented below. Target reliabilities should be greater than .70 and Cronbach alpha values for the seven scales and 22 subscales ranged from .86-.98

<b>Measure</b>	<b># of Items</b>	<b>Cronbach's Alpha</b>
<b>360° Refined™</b>	75	.98
<b>Core Leadership</b>	37	.96
<i>Strategy</i>	10	.90
<i>Action</i>	15	.95
<i>Results</i>	12	.93
<b>Adaptive Leadership</b>	38	.97
<i>Organizational Justice</i>	10	.95
Decision Fairness	4	.91
Information Sharing	3	.92
Outcome Concern	3	.87
<i>Emotional Intelligence</i>	12	.96
Self-Awareness	3	.85
Self-Management	3	.88
Social Awareness	3	.91
Relationship Management	3	.86
<i>Character</i>	9	.92
<i>Development</i>	7	.92

## CONSTRUCT VALIDITY

To assess the dimensionality of 360° Refined an exploratory factor analysis was performed on the seventy-five items. The Kaiser-Meyer-Olkin value was .944, exceeding the recommended value of .6. The Bartlett's Test of Sphericity reached statistical significance which supports the factorability of the correlation matrix. A principal component analysis suggested a two-factor solution with the two factors accounting for 50.53% of the variance in the correlation matrix. The resulting eigenvalues and associated percent of variance accounted for are shown in the table below. A Catell's scree test provided further confirmation of the proposed two-factor structure with the plot of the eigenvalues breaking and becoming horizontal at or near two.

## PSYCHOMETRIC PROPERTIES



*Scree plot resulting from exploratory factor analysis of 360° Refined*

<b>Factor</b>	<b>Eigenvalue</b>	<b>% of Variance</b>	<b>Cumulative Variance</b>
1	1	29.31	29.31
2	2	21.22	50.53

To interpret the two-factor solution suggested from the principal component analysis, the factors were rotated using Varimax technique. The rotated solution suggests a simple structure with both factors containing a number of strong loadings and the vast majority of variables loading strongly on only one factor. The interpretation of the two factors is consistent with the design of 360° Refined™ Core and Adaptive leadership superfactors. Taken with the reliability analysis presented above, these results support the two-factor structure of 360° Refined™.

## COMPARISON TO JOB PERFORMANCE

The 360° Refined™ assessment has been studied in comparison to job performance in large-scale studies representing a cross-section of industries. Across studies, the 360° Refined™ explains a highly significant amount of job performance (more than 60%) for individuals in middle management through senior leadership positions. 580 individuals provided multi-rater feedback ratings for 54 senior leaders in four organizations representing telecommunications, construction, manufacturing, and government (Bradberry, 2002). The leaders also provided self-ratings of their leadership skills. Scores on the 360° Refined™ assessment were compared to job performance ratings for each individual via self-score and score from others.

The self assessment scores explained 12.2% of the variance in job performance and the 360° scores explained 43.2% of the variance in job performance. Job performance was defined through each leader's performance on the metrics established by their respective organizations for their position.

An analysis of job performance based upon the financial indicators from the leader's metrics indicates those who had high scores on the 360° Refined™ assessment were 13% more productive than their counterparts with lower scores. This difference accounts for \$162,500 more productivity per head for leaders with high scores on the assessment.

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