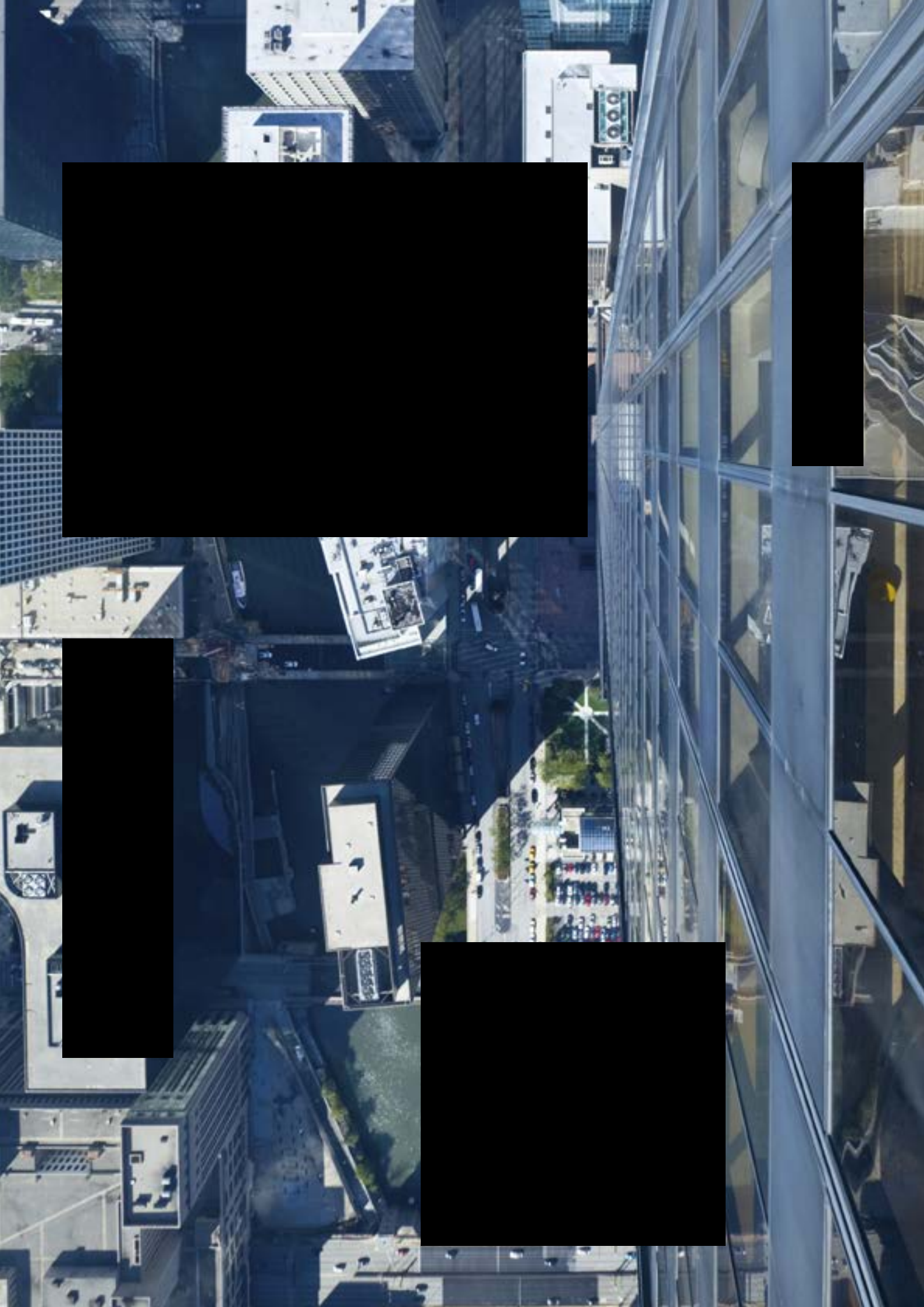


Saville Assessment

WillisTowersWatson 



Wave Leadership Impact Technical Summary



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1.0 Introduction to the Leadership Impact Model

The Leadership Impact model is a new model of leadership effectiveness which focuses on the impact that a particular leader has in the workplace.

Its development has been guided by empirical data from conception to conclusion, based on international research on thousands of individuals working across hundreds of different organizations. The model is powered by the Saville Assessment Wave portfolio and therefore benefits from the established psychometric rigor of these tools and, in particular, Wave's validation-centric development method.

This document introduces the new Impact model of leadership, which attempts to bridge the gap between specific, behaviorally-based and general, outcome-based approaches to measuring workplace leadership. Our research suggests that focusing on a leader's impact provides a psychometrically-robust, conceptually-appropriate and especially-efficient model of leadership performance.

1.1 Building on the Existing Leadership Model

Saville Assessment's existing leadership model is an established and globally used model of workplace leadership effectiveness. It captures both broad areas of general leadership effectiveness and more specific leadership styles which individual leaders may adopt depending on the situation in which they find themselves. Through data collected over a decade, we have been able to identify trends and collect substantial banks of validation evidence. From this, we have leveraged empirical insights which have now been brought to bear in order to enhance the existing leadership model.

The new Leadership Impact model is the latest milestone in our international program of leadership data collection, analysis and refinement. In addition to providing a new prediction of a leader's likely workplace impact, the Leadership Impact model also retains valuable leadership style information from the existing model and integrates these different sources of data to produce new reflections and development guidance text. This guidance has been written to help leaders best leverage the different behaviors that they may deploy in the workplace.

1.2 The New Leadership Impact Model

The Leadership Impact model and aligned report put the Saville Assessment 3P framework at the heart of our leadership offering. Based on our extensive research, the scales in the Impact model have been grouped under the three Ps of leadership – Professional, People and Pioneering. Professional leaders are likely to be effective at leading in specialist contexts and providing professional or technical knowledge; People leaders are likely to be effective at managing a wide range of people across teams or functions and Pioneering leaders are likely to be effective at driving success, change and growth.

The three Ps themselves were identified from factor analyses on large, global data sets. A consistent picture has emerged from our leadership assessment data over the years showing that three overarching factors provide a reliable and useful framework in which to position the more specific components of leadership effectiveness.

In addition to being derived from factor analyses, the development of the new leadership model also sought to clarify the empirical relationships between the three P scales and a range of different workplace performance criteria. The original 3P model validation, see Hopton et al. 2014, was based on 308 individuals who completed Wave Professional Styles and for whom sets of independent performance ratings were collected, concurrently, from stakeholders. In this research, we specified a priori which criteria each leadership construct would be expected to forecast.

Having carried out criterion validation and factor analysis to cement the three P scales as our overarching framework of leadership effectiveness, we then turned our attention to consider the more specific units of leadership effectiveness in our model. Our primary research question was of both an empirical and a practical nature: When trying to define what matters for effective leadership, how detailed do we need to be in terms of what we're measuring? Is leadership really best measured in terms of whole business level outcomes – or is it best evidenced in the specific day-to-day behaviors of leaders? It is to this question of criteria – namely, what we are trying to measure – that we now turn our attention.

1.3 The Criterion Space – What does 'good' look like?

Work performance, as a construct, has been the subject of considerable scientific scrutiny, with many different models of multidimensional performance having been elucidated over the last quarter century. Prominent examples include the models of Borman & Motowidlo, (1993), Campbell et al. (1993), Campbell (2012), Kurz & Bartram (2002) and Murphy (1989).

While such models inevitably differ in certain respects, a common feature of many is a focus on workplace 'competencies'. Kurz and Bartram (2002) adopted a definition of competencies as 'sets of behaviors that are instrumental in the delivery of desired results or outcomes'. This definition is useful because it introduces one of the key assumptions of many performance models; namely that performance can be thought of as being composed of a hierarchy of components. At the most basic level, tangible behaviors can be clustered together into sets or groups to form competencies. These competencies are often themselves clustered and sometimes combined with other kinds of performance metrics to form higher-order performance criteria.

There has been a degree of debate about the best unit of analysis when measuring workplace performance. While the pragmatic answer is that the best approach to take depends somewhat on the situation at hand, the measurement of leadership performance poses particular challenges as, by its very nature, leadership performance is invariably concerned with more than 'just' the behaviors demonstrated by the leader. When talking about leadership performance, we are often also concerned with the leader's effect or impact on others and, sometimes, on the organization.

Many of the most well-known models of workplace performance feature competencies or components which attempt to capture leadership performance. For example, the Great Eight model (Kurz & Bartram, 2002) has a scale called 'Leading & Deciding'; likewise, the Campbell (2012) model features six sub-factors which together comprise leadership performance. An advantage of such competency-based approaches to leadership performance is in their clear conceptual link to specific behaviors and actions. As such, they can frequently be measured relatively straightforwardly and it is often possible to draw transparent inferences from results derived from such models. Nevertheless, their specificity can also be a hindrance as they tend to be somewhat role- and context-

specific in nature. In some cases, this specificity may render it impossible or inappropriate to compare leaders in different contexts using the same competencies.

On the other hand, leaders can be (and often are) judged against a range of higher-order performance criteria including indices such as company share price, turnover, staff engagement levels, staff retention rates and countless other organization-level metrics. These performance criteria tend to be much broader in focus and thus more generalizable across contexts and situations. They also benefit from being commonly perceived as somewhat more 'objective' in nature than competencies. This is largely because they frequently take the form of quantifiable metrics which do not rely on the so-called 'subjective' stakeholder ratings of performance typically used to measure competencies. Yet, organizational outcomes are often somewhat disconnected from the specific actions of individuals; clearly, no one leader (no matter how omnipotent) can reasonably be held solely responsible for a company's total share price, turnover, staff engagement levels and staff retention rates. So there remains a question about the value of such broad criteria in forecasting individual leader performance.

1.4 Why Focus on Impact?

Having outlined just a few of the issues associated with the measurement of workplace performance, we'd like to reiterate that both specific competencies and broad outcome criteria can and do have their uses. There will often be requirements or considerations in a given situation which favor the use of one type of criteria over others.

Nevertheless, our latest research argues for a model of leadership performance which acknowledges the *impact* of leaders in the achievement of organizational outcomes, while also recognizing that individual leader behaviors matter. We propose that the use of competencies to measure leadership performance can be helpfully supplemented by focusing on higher-order, but still behaviorally oriented, organizational outcomes. Our new Impact model tries to find a 'goldilocks zone' between relying too heavily on either very specific behavioral criteria or on very general organizational-outcome criteria.

1.5 The Leadership Impact Hierarchy - 3Ps, 9 Impact Areas, 18 Leadership Styles

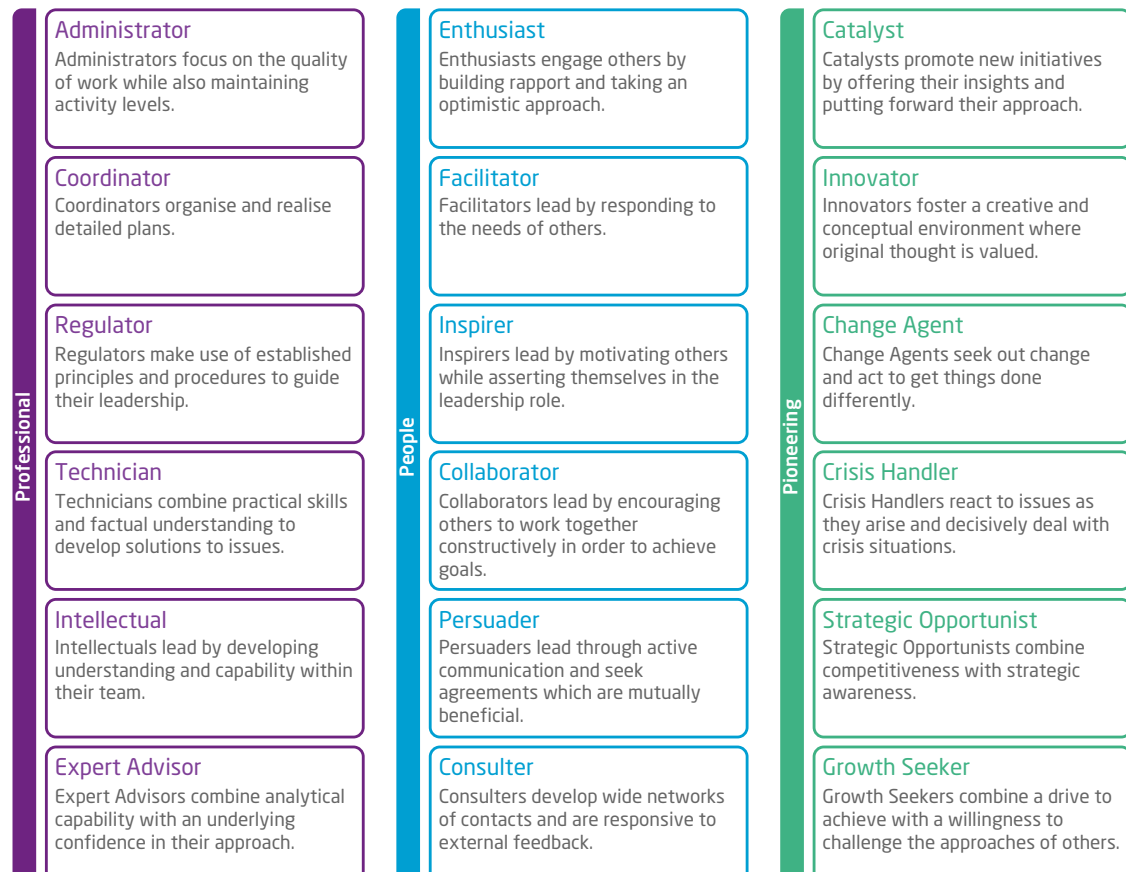
Derived from factor analysis and validation, as described in this document, the Impact model comprises nine primary Impact areas. They are clustered under the three higher order 3P factors, and their definitions are provided below.



These represent nine areas at work in which leaders can exert a critical impact. The nine Impact areas can be thought of as primary components of effective workplace leadership. They are aligned conceptually to the three higher order P scales.

There are also 18 Leadership Styles which are grouped in pairs under each of the nine Impact scales.

Each pair of styles forms the primary component of the prediction equation for each Impact area, as described below.



1.6 Predicting Leadership Impact

In addition to needing to ascertain what the best units of analysis are for measuring leadership effectiveness, we also need to identify *how* to measure these constructs. The measurement of leadership impact creates a particular challenge. As is outlined above, traditional workplace performance measures tend to take the form of stakeholder ratings of behavioral effectiveness (e.g. 360 assessment) or use of so-called 'objective' measures. However, the Impact model is intended as a unit of analysis in between aggregated behavioral effectiveness measures and overall organizational measures. A new measurement method was required.

A new 360 rating format, using a 1-7 Likert Impact scale, was devised and trialed in an international validation study (for further details, please refer to the Validity section of this document). Analysis of this rating format demonstrated that asking stakeholders to directly rate the impact of a leader in the nine Impact areas was an appropriate and effective way to collect leadership impact data.

However, in many leadership assessment scenarios, we do not have access to criterion data in the form of 360 ratings. Often, we have only self-report data from the assessment taker. Therefore, the Leadership Impact Expert Report includes a prediction, based on self-report data, of the leader's likely impact in the nine Impact areas. These prediction equations are primarily formed of the Wave styles dimensions underpinning the two leadership styles which relate to each Impact area. These scales are weighted according to their conceptual and empirical importance and are combined with other Wave scales to maximize the validity. The evidence used to refine these a priori predictions comes from the first validation study described in the Validity section of this document.

In summary, the Leadership Impact Expert Report contains an Impact Prediction Profile, which is powered by self-report Wave data. More direct measurement of a leader's Impact can be achieved through the Leadership Impact 360 Report.

2.0 Reporting

Figure 1. Summary Leadership Styles Profile



Figure 2. Leadership Profile – Professional Service & Product Delivery

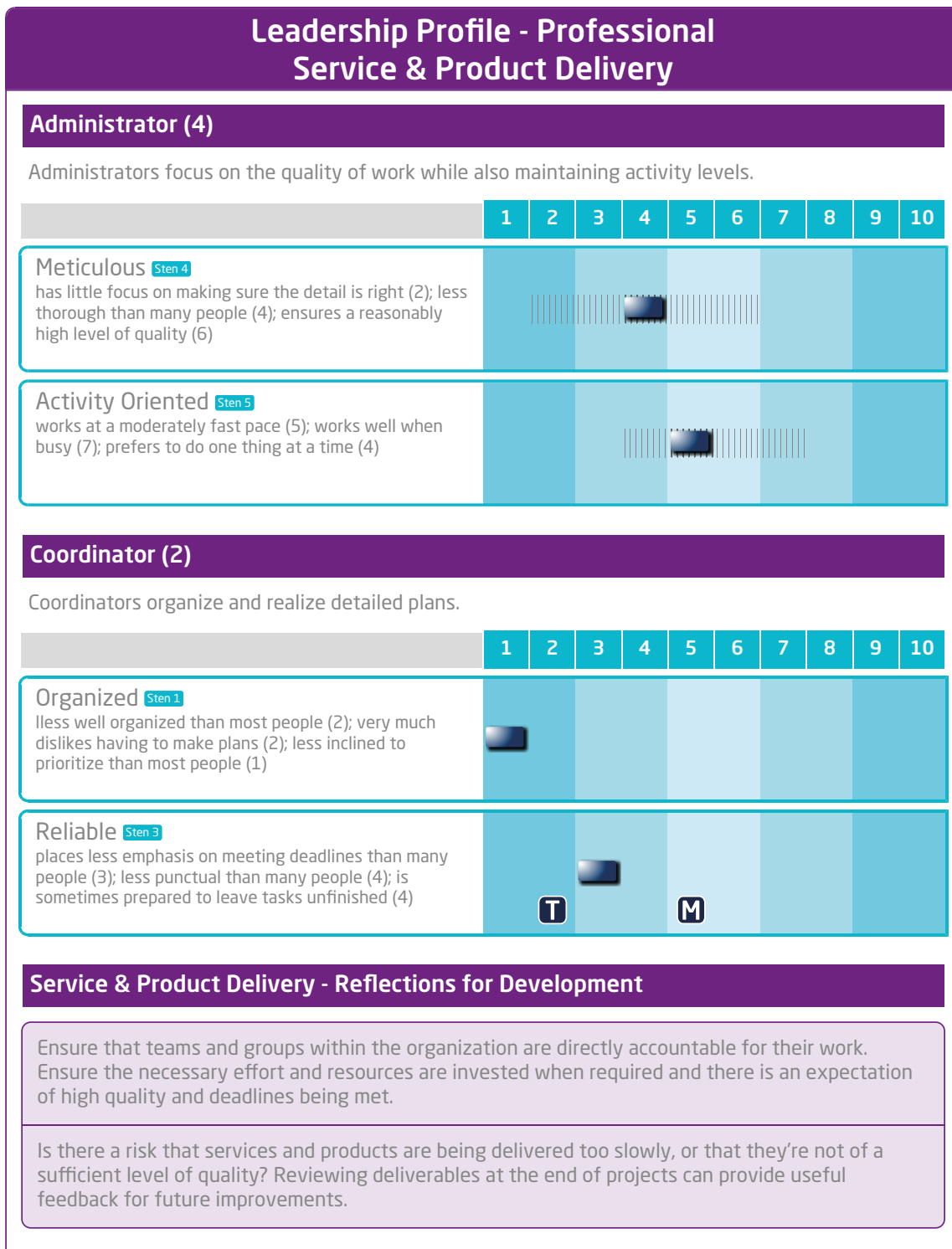


Figure 3. Leadership Impact Potential Prediction

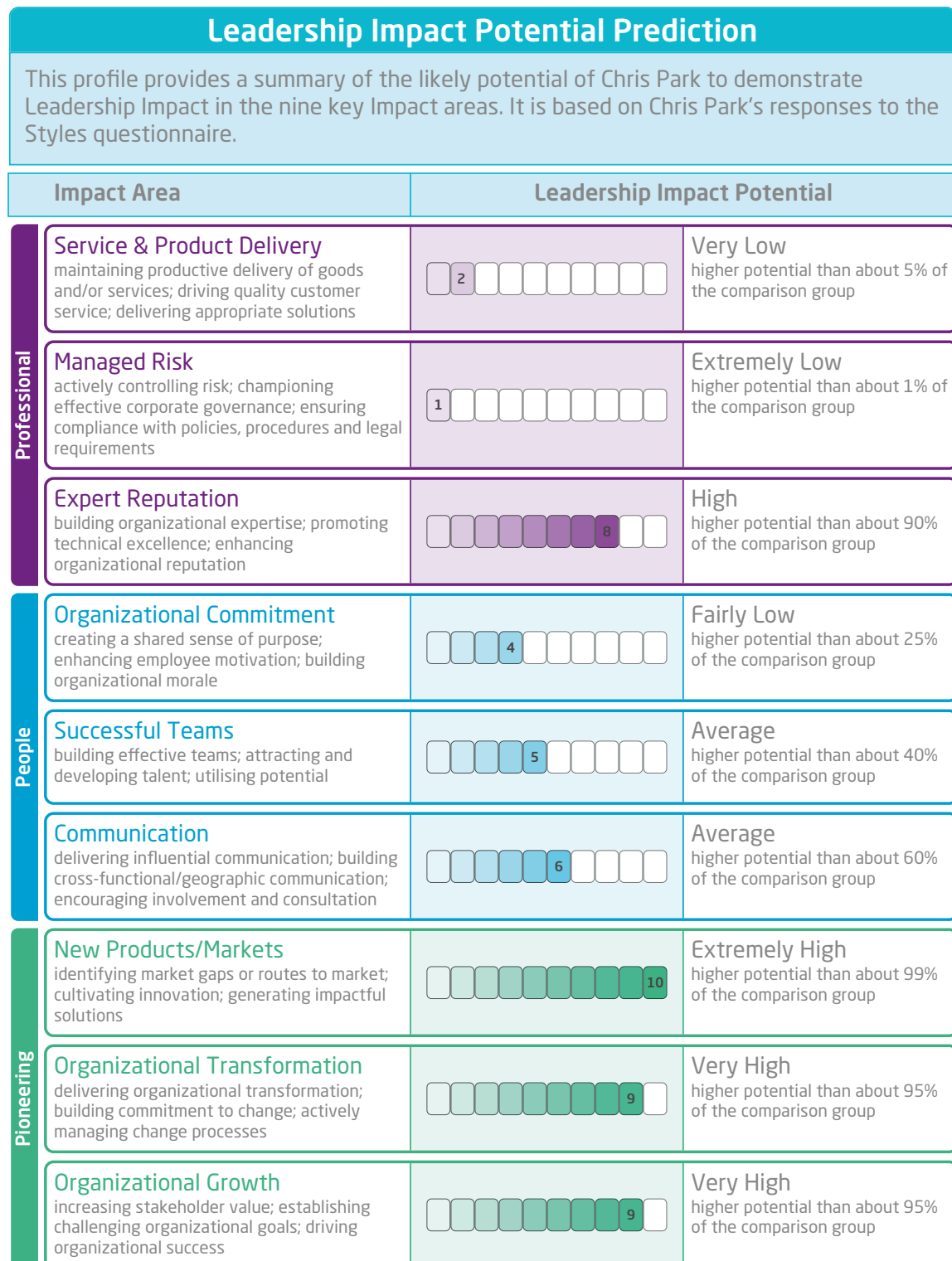
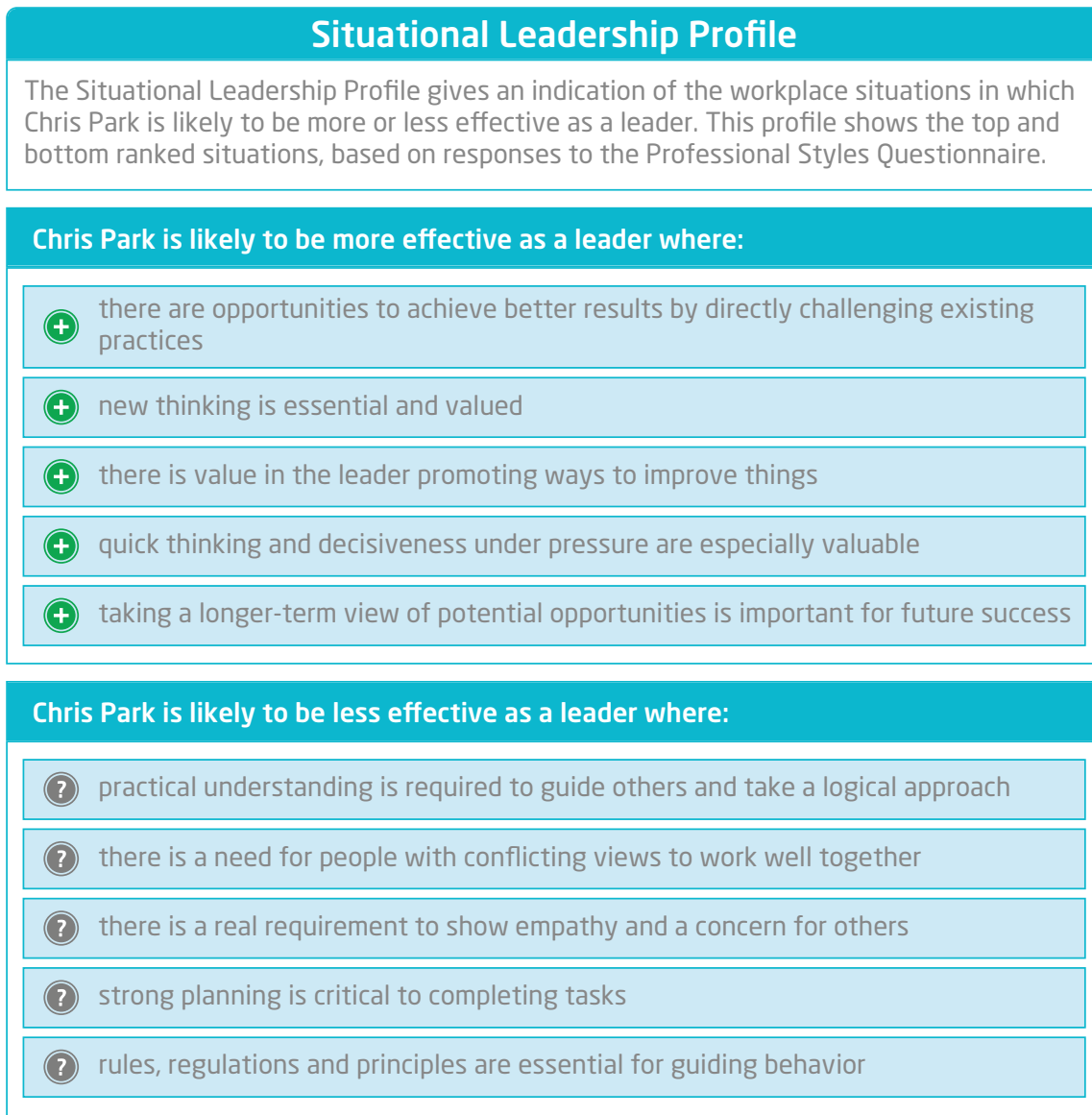


Figure 4. Situational Leadership Profile



3.0 Reliability

This section provides two different forms of reliability evidence for the Leadership Impact model. Alternate form reliability is where two equivalent (parallel) versions of a questionnaire are completed by the same sample of individuals. Test-retest reliability is where the same sample of individuals complete the same questionnaire twice, with a time delay between the two completions. In both types of analysis, the two sets of scores are correlated and this provides a useful indication of the consistency of the measure of a questionnaire. A development aim of the Leadership Impact model was that these forms of reliability should be as high as possible.

3.1 Alternate Form Reliability

Tables 1 and 2 show alternate form reliability figures for the nine Leadership Impact areas and the 18 Leadership Styles. This is based on a sample of 1,153 participants who completed both the invited access and the supervised access versions of Wave Professional Styles. Leadership Impact scores were derived from these data using pre-specified equations. The nine Leadership Impact areas demonstrate high alternate form reliabilities with coefficients ranging from .87 (Managed Risk) to .94 (Service & Product Delivery; Organizational Transformation; Organizational Growth). The 18 Leadership Styles also demonstrate high alternate form reliabilities with coefficients ranging from .83 (Technician; Expert Advisor) to .93 (Coordinator) and a median reliability coefficient of .89.

Table 1: Alternate Form Reliability - Invited Access (IA) vs. Supervised Access (SA) - 9 Leadership Impact area scales (N=1,153)

Leadership Impact Area	(IA) Mean	(IA) SD	(SA) Mean	(SA) SD	SEm* (Sten)	r_t	Other Highest Correlation	Other Impact Area
Service & Product Delivery	123154.10	16232.49	123375.83	15994.45	.47	.94	.50	Organizational Growth
Managed Risk	123115.02	10037.34	125441.23	10059.33	.71	.87	.48	Organizational Transformation
Expert Reputation	113042.01	11790.34	114001.06	11284.52	.62	.90	.51	Managed Risk
Organizational Commitment	122931.13	13417.61	122885.71	13385.22	.60	.91	.58	Communication
Successful Teams	117482.53	13155.88	114786.70	13202.11	.57	.92	.61	Organizational Commitment
Communication	109209.81	13441.76	106461.88	12887.00	.59	.91	.72	Service & Product Delivery
New Products/ Markets	103914.14	14415.05	102267.32	14746.25	.49	.94	.76	Service & Product Delivery
Organizational Transformation	109710.47	17442.46	109180.40	17431.44	.50	.94	.74	Service & Product Delivery
Organizational Growth	108730.75	16480.80	107136.79	16448.20	.49	.94	.75	Managed Risk
Mean average	114587.77	14045.97	113948.55	13937.61	.56	.92	.63	
Median average	113042.01	13441.76	114001.06	13385.22	.57	.92	.61	
Min	103914.14	10037.34	102267.32	10059.33	.47	.87	.48	
Max	123154.10	17442.46	125441.23	17431.44	.71	.94	.76	

*Standard Error of Measurement

Table 2: Alternate Form Reliability - Invited Access (IA) vs. Supervised Access (SA) - 18 Leadership Styles scales (N=1,153)

Leadership Style	(IA) Mean	(IA) SD	(SA) Mean	(SA) SD	SEm* (Sten)	r_t	Other Highest Correlation	Other Leadership Style
Administrator	129.83	18.73	129.12	18.62	.62	.90	.56	Coordinator
Coordinator	129.89	22.24	131.44	21.32	.54	.93	.56	Coordinator
Regulator	125.32	18.79	128.51	18.82	.65	.89	.49	Coordinator
Technician	133.27	12.77	132.50	13.40	.82	.83	.33	Intellectual
Intellectual	116.25	19.90	117.23	19.82	.59	.91	.38	Innovator
Expert Advisor	122.57	14.34	124.44	15.14	.82	.83	.35	Intellectual
Enthusiast	133.03	17.67	131.98	17.88	.70	.88	.49	Consulter
Facilitator	129.03	20.23	129.29	19.49	.68	.88	.62	Collaborator
Inspirer	118.24	22.48	115.54	22.73	.55	.92	.52	Strategic Opportunist
Collaborator	124.20	17.02	118.52	18.16	.70	.88	.59	Facilitator
Persuader	113.38	18.27	107.76	18.22	.62	.91	.52	Strategic Opportunist
Consulter	113.95	16.82	110.94	15.63	.74	.86	.47	Enthusiast
Catalyst	111.23	15.37	109.85	14.79	.75	.86	.46	Strategic Opportunist
Innovator	111.05	21.08	108.05	22.09	.60	.91	.42	Strategic Opportunist
Change Agent	119.58	17.84	118.59	18.26	.67	.89	.52	Crisis Handler
Crisis Handler	108.00	20.24	107.07	20.95	.59	.91	.50	Change Agent
Strategic Opportunist	109.37	21.80	106.41	22.15	.60	.91	.52	Inspirer
Growth Seeker	113.21	17.02	112.06	17.28	.73	.87	.50	Strategic Opportunist
Mean average	120.08	18.48	118.85	18.60	.67	.89	.49	
Median average	118.91	18.50	117.87	18.44	.66	.89	.50	
Min	108.00	12.77	106.41	13.40	.54	.83	.33	
Max	133.27	22.48	132.50	22.73	.82	.93	.62	

*Standard Error of Measurement

3.2 Test-Retest Reliability

Tables 3 and 4 show test-retest reliability figures for the nine Leadership Impact areas and the 18 Leadership Styles. This is based on a sample of 100 participants who completed Wave Professional Styles twice with an average period of 18 months between the two completions. Leadership Impact scores were derived from these data using pre-specified equations. The nine Leadership Impact areas demonstrate high test-retest reliabilities with coefficients ranging from .70 (Managed Risk) to .86 (Service & Product Delivery) and a median reliability of .83. The 18 Leadership Styles demonstrate acceptable test-retest reliabilities with coefficients ranging from .62 (Catalyst) to .85 (Administrator) and a median reliability coefficient of .76.

Table 3: Test-Retest Reliability of 9 Leadership Impact area scales (N=100)

Leadership Impact Area	Mean _{t1}	SD _{t1}	Mean _{t2}	SD _{t2}	SEm (Sten)	r _t
Service & Product Delivery	126418.41	15567.00	126736.47	15488.09	.75	.86
Managed Risk	123641.19	9506.62	123100.38	9708.52	1.10	.70
Expert Reputation	114882.05	11263.48	113871.32	11528.56	.81	.84
Organizational Commitment	119841.09	14712.02	117233.19	15440.89	.81	.84
Successful Teams	114315.12	11813.06	114809.97	13390.85	.90	.80
Communication	108436.68	13486.89	107279.85	13486.14	.95	.78
New Products/Markets	104075.72	13330.53	104271.09	13134.77	.97	.77
Organizational Transformation	106374.45	17685.66	108432.60	18087.47	.82	.83
Organizational Growth	107354.19	16917.93	107425.77	16780.33	.78	.85
Mean average	113926.54	13809.24	113684.52	14116.18	.88	.81
Median average	114315.12	13486.89	113871.32	13486.14	.82	.83
Min	104075.72	9506.62	104271.09	9708.52	.75	.70
Max	126418.41	17685.66	126736.47	18087.47	1.10	.86

Note: There was an average of 18 months between the first and second assessments.

Table 4: Test-Retest Reliability of 18 Leadership Styles (N=100)

Leadership Style	Mean _{t1}	SD _{t1}	Mean _{t2}	SD _{t2}	SEm (Sten)	r _t
Administrator	132.59	19.05	133.03	20.25	.79	.85
Coordinator	134.44	19.45	134.26	19.69	.91	.79
Regulator	127.32	17.16	125.99	18.33	1.07	.71
Technician	133.55	15.51	132.94	15.40	1.09	.70
Intellectual	119.08	19.39	118.24	20.41	.86	.82
Expert Advisor	124.94	13.57	123.55	13.24	1.08	.71
Enthusiast	129.20	19.00	124.92	20.60	.92	.79
Facilitator	126.13	19.74	123.24	20.64	.81	.84
Inspirer	116.18	22.00	119.46	23.67	.92	.79
Collaborator	121.48	16.64	119.07	17.53	1.05	.73
Persuader	111.00	18.00	109.83	18.84	.88	.81
Consulter	114.97	18.96	110.89	19.00	.93	.78
Catalyst	110.87	14.87	111.61	12.67	1.24	.62
Innovator	113.00	21.07	112.86	22.20	1.00	.75
Change Agent	117.92	18.00	119.32	19.50	.88	.81
Crisis Handler	104.90	21.45	106.19	21.45	.95	.77
Strategic Opportunist	107.82	22.43	107.50	22.06	.90	.80
Growth Seeker	112.55	18.23	111.30	18.53	1.02	.74
Mean average	119.88	18.58	119.12	19.11	.96	.77
Median average	118.50	18.98	119.19	19.59	.93	.79
Min	104.90	13.57	106.19	12.67	.79	.62
Max	134.44	22.43	134.26	23.67	1.24	.85

Note: There was an average of 18 months between the first and second assessments.

Overall, the alternate form and test-retest reliabilities provide clear evidence for the reliability of the consistency and construct separation of the Leadership Styles and Impact scales.

Further information about reliability can be found in the Wave Professional Styles Handbook (Second Edition).

4.0 Validity

This section includes details about validity evidence for the Leadership Impact model. Validity evidence for Wave Professional Styles, the questionnaire which the Leadership Impact Report is powered from, can be found in the Wave Professional Styles Handbook. For further details, please contact Saville Assessment.

This section includes two different forms of validity evidence for the Leadership Impact model: Criterion-related and Construct Validity.

Criterion-related validity is the single most important property of an assessment. Criterion-related validity shows the relationship between scores in the Leadership Impact model and the relevant measure of leadership performance at work.

Construct validity is the extent to which an assessment measures a hypothetical construct or area of human performance. The scores from an assessment with good construct validity would be expected to behave as if the underlying construct were directly being measured.

4.1 Criterion-Related Validity

Table 5 details the concurrent validity of self-ratings on the 9 Leadership Impact areas against matched 9 Leadership Impact areas composited from the Wave Dimension level scales (assessed using third-party ratings on 369 individuals).

Table 5: Concurrent Validity of the 9 Leadership Impact areas in two different studies from self-report Wave data against matched 9 Leadership Impact areas composited from Wave Dimension level scales (external ratings of work effectiveness), unadjusted and adjusted for criterion unreliability.

Leadership Impact Area	Study 1: Epsom sample (N=369)		Study 2: Standardization sample (N=631-632)	
	r	r _c	r	r _c
Service & Product Delivery	.34	.66	.27	.52
Managed Risk	.24	.54	.07	.17
Expert Reputation	.24	.48	.24	.47
Organizational Commitment	.27	.44	.32	.53
Successful Teams	.25	.43	.33	.57
Communication	.25	.46	.32	.59
New Products/Markets	.16	.34	.31	.66
Organizational Transformation	.30	.60	.38	.76
Organizational Growth	.30	.63	.36	.76
Mean average	.26	.51	.29	.56
Median average	.25	.48	.32	.57
Min	.16	.34	.07	.17
Max	.34	.66	.38	.76

Note: Any raw correlation higher than .10 is statistically significant at the $p < .05$ level (one tailed or two tailed).

r is the unadjusted validity coefficient. r_c validities have been adjusted for criterion unreliability using an inter-rater reliability correction figure based on the reliability of the criteria (based on 263 pairs of criterion ratings). No further corrections were applied (e.g. restriction of range, predictor unreliability).

Table 6 details the concurrent validity of self-ratings on the 18 leadership styles against independent criteria of performance in workplace areas, assessed using third-party ratings on 369 individuals.

Table 6: Concurrent Validity of self-ratings on the 18 Leadership Styles against three global independent criteria and an overall global effectiveness composite (external ratings of work performance), both unadjusted and adjusted for criterion unreliability (N=369)

Leadership Style	Applying Specialist Expertise		Accomplishing Objectives		Demonstrating Potential		Overall Effectiveness	
	r	r _c	r	r _c	r	r _c	r	r _c
Administrator	.08	.16	.15	.29	.12	.19	.14	.25
Coordinator	.08	.16	.10	.21	.03	.05	.08	.15
Regulator	-.04	-.07	-.04	-.07	-.12	-.19	-.09	-.15
Technician	.04	.08	-.05	-.10	-.02	-.04	-.01	-.02
Intellectual	.06	.12	-.01	-.02	.08	.13	.06	.10
Expert Advisor	.16	.32	.14	.28	.20	.33	.21	.37
Enthusiast	.13	.27	.16	.32	.06	.10	.14	.25
Facilitator	-.02	-.03	-.01	-.03	-.12	-.20	-.07	-.13
Inspirer	.10	.20	.20	.41	.23	.37	.23	.40
Collaborator	-.05	-.10	-.01	-.01	-.12	-.20	-.08	-.15
Persuader	.09	.18	.07	.15	.15	.24	.14	.24
Consulter	.00	.00	.08	.15	.05	.08	.05	.09
Catalyst	-.04	-.08	-.01	-.01	.12	.19	.04	.07
Innovator	-.04	-.08	-.08	-.17	.08	.13	-.01	-.01
Change Agent	.14	.27	.14	.29	.19	.31	.20	.36
Crisis Handler	.17	.34	.16	.32	.21	.33	.23	.40
Strategic Opportunist	.05	.10	.12	.24	.22	.36	.17	.30
Growth Seeker	.06	.12	.15	.29	.25	.40	.20	.35
Mean average	.05	.11	.07	.14	.09	.14	.09	.16
Median average	.06	.12	.09	.18	.10	.16	.11	.19
Min	-.05	-.10	-.08	-.17	-.12	-.20	-.09	-.15
Max	.17	.34	.20	.41	.25	.40	.23	.40

Note: Any raw correlation higher than .10 is statistically significant at the $p < .05$ level. Any raw correlation higher than .135 is statistically significant at the $p < .01$ level. r is the unadjusted validity coefficient. r_c validities have been adjusted for criterion unreliability using an inter-rater reliability correction figure based on the reliability of the criteria (based on 263 pairs of criterion ratings). No further corrections were applied (e.g. restriction of range, predictor unreliability).

4.2 Construct Validity

Powered by the established Wave Professional Styles questionnaire, the Leadership Impact model and report are underpinned by industry-leading levels of validity. Further details about the comprehensive validity evidence for the underpinning Wave scales can be found in the Wave Professional Styles Handbook (Second Edition).

In addition to the existing validity of Wave, one main study has been carried out to date to provide specific validity evidence for the Leadership Impact model. This is outlined below.

Validation Study: Construct Validity in an International Mixed Occupational Sample

A global research study was carried out which surveyed a mixed occupational group of professionals.

A number of these professionals (N=6,410) were invited to rate the following:

1. Their manager's effectiveness in terms of the 36 Competency Dimensions of the Wave Styles model.
2. Their manager's impact in terms of the nine Impact Areas.
3. Their manager's effectiveness in terms of three Global Performance scales, aggregated to produce a single measure of Overall Performance.

The Effectiveness scale used a 1-7 Likert format, where 1=Extremely Ineffective, 4=Unsure, 7=Extremely Effective.

The Impact scale used a 1-7 Likert format, where 1=Large Negative Impact, 4=Unsure, 7=Large Positive Impact.

A Sustainable Engagement Index score was also available for each manager, which served as an additional performance criterion.

A summary of key results is provided below:

- The average correlation between the nine Impact areas and the 36 Competency Dimensions was .50.
- The minimum correlation between any Impact area and any Competency Dimension was .38.
- The maximum correlation between any Impact area and any Competency Dimension was .60.

These results suggest that there is a relatively good degree of construct convergence between these two different criterion models. This provides reassurance that the two different models are broadly in agreement, thereby offering some construct validation support for the Impact model. Nevertheless, the fact that the two sets of criteria do not overlap too closely also reassures that the Impact model is introducing something new, over and above the measurement offered by the 36 Competency Dimensions.

- The average correlation between the nine Impact areas and the Overall Performance measure was .60.
- The average correlation between the 36 Competency Dimensions and the Overall Performance measure was .74.
- The average correlation between the nine Impact areas and the Sustainable Engagement Index was .46.
- The average correlation between the 36 Competency Dimensions and the Sustainable Engagement Index was .35.

These results suggest that both models correlate strongly with Overall Performance and, to a lesser extent, with Sustainable Engagement.

This research suggests that the Impact model offers something new to the measurement of leadership performance, a new approach which sits somewhere between specific, behavioral competency performance measures and general, organization-level outcome measures.

In this sample, both the Impact and more traditional competency model show clear correlations with Overall Performance and Sustainable Engagement measures. The results of this study suggest that if one wishes to focus primarily on the individual's overall performance in terms of behaviors then the competency model may be the most suitable; on the other hand, if one wishes to focus on the higher-order outcome of sustainable engagement then the Impact model may be the better choice.

It is worth interpreting all of these results in light of the degree of multicollinearity seen in this particular dataset. In general, it appears that when people rated their manager positively in one area, they tended to rate their manager positively across many other areas. Nevertheless, the different results for the impact scales lend support for these scales construct validity.

We have an active program to collect further validation studies and analyses of the Impact model, and are happy to hear from any organization who would likely to be involved in validation research.

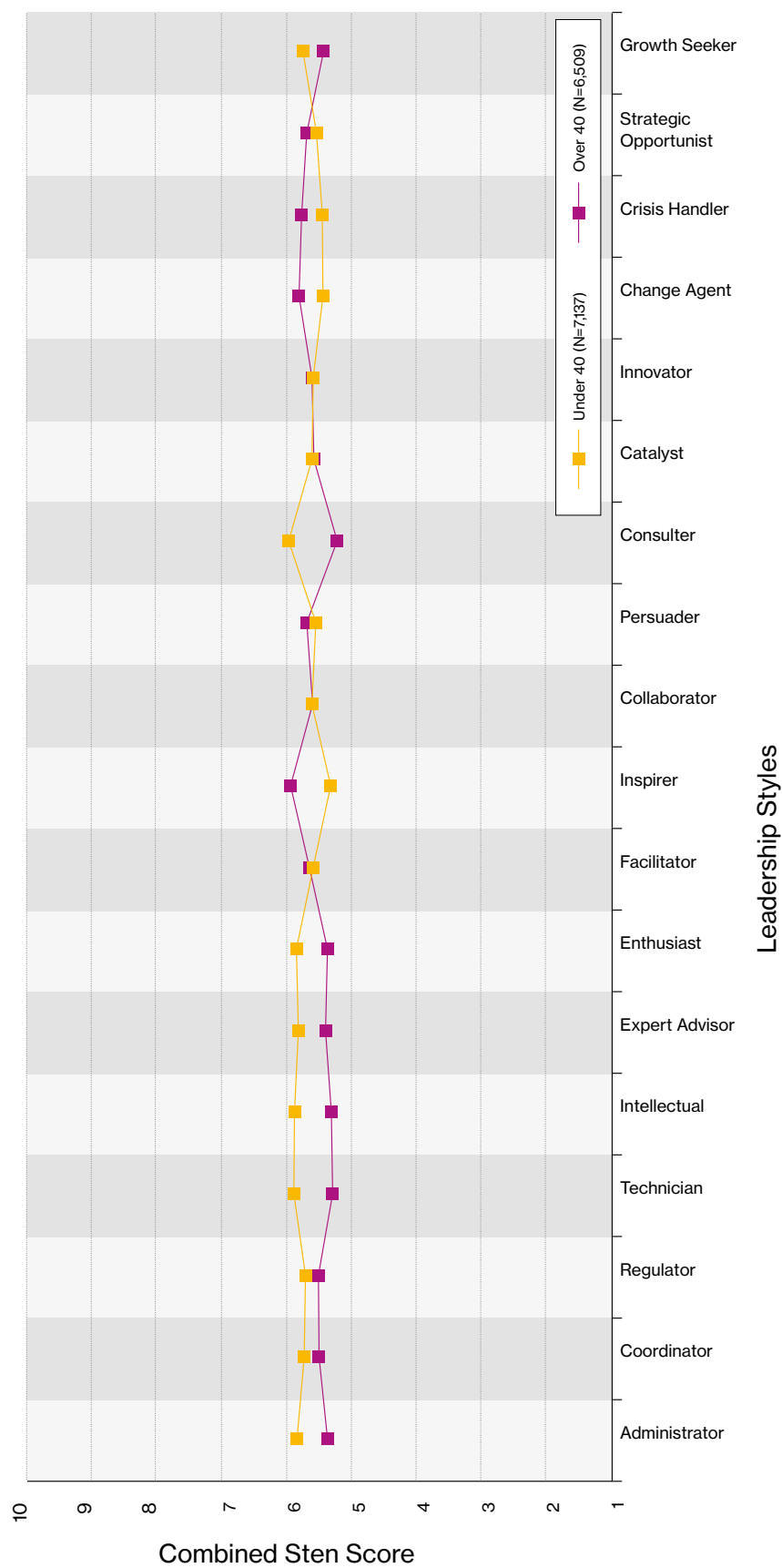
5.0 Fairness

This section introduces information about group differences in scores achieved on the Leadership Impact Model. The international sample consisted of 13,646 individuals from a general background. It includes a comparison of leadership styles in different groups created according to the following criteria:

- Age
- Gender
- Cultural Background

The data presented on the differences between means for different groups generally show no, or small differences between groups, and so it provides reassurance about the fairness of the Leadership Impact Model for assessing different groups of people defined by gender, age and cultural background.

Age Trends International - Sten Profile (N = 13,646)

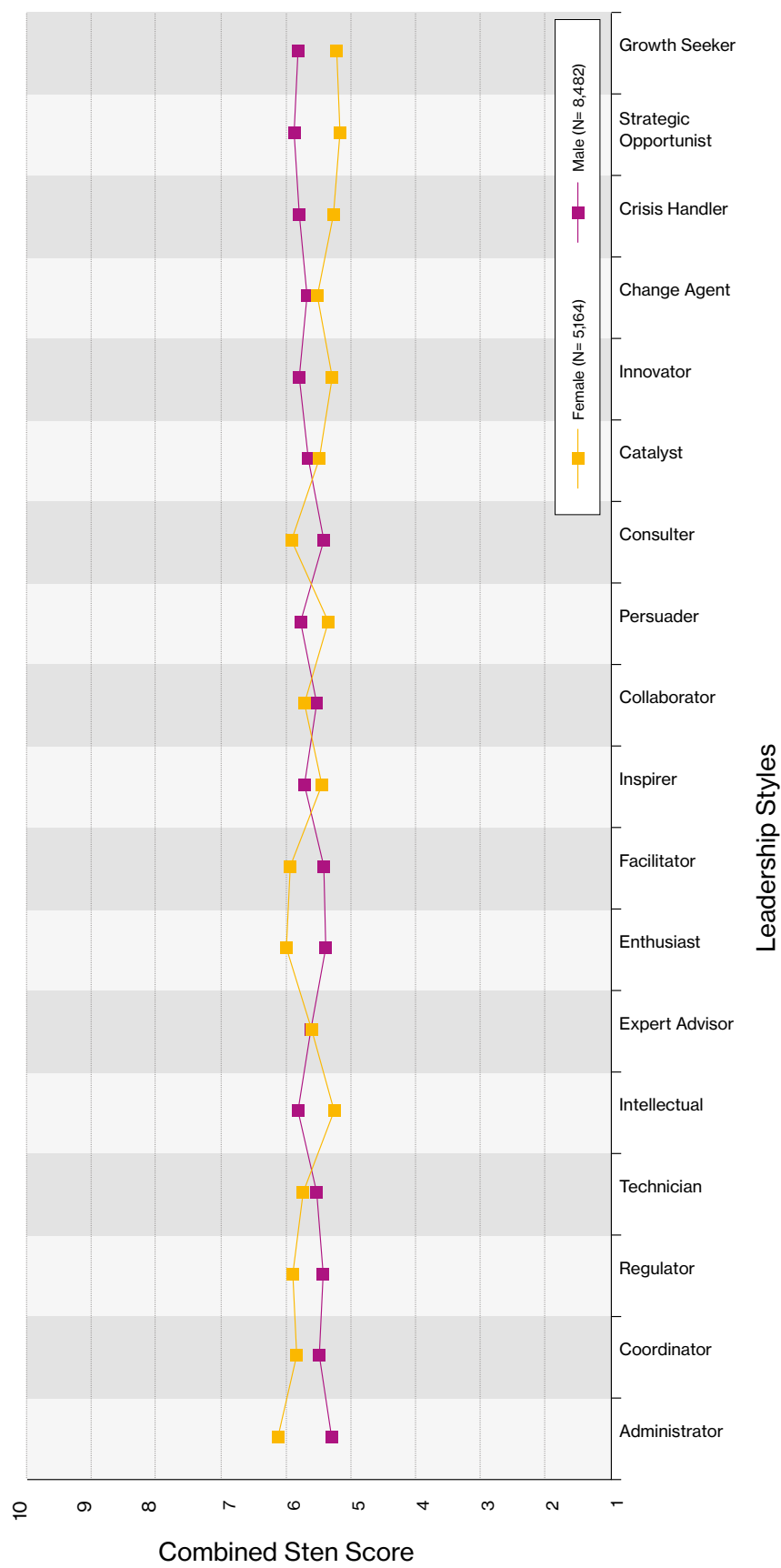


People under the age of 40 (N= 7,137) were compared to people over the age of 40 (N=6,509). Differences ranged from non-existent to small.

The largest difference was on Consulter where the 'Under 40' group were, on average, .75 of a Sten higher than the 'Over 40' group.

All other age group trends were below .62 of a Sten.

Gender Trends International - Sten Profile (N = 13,646)

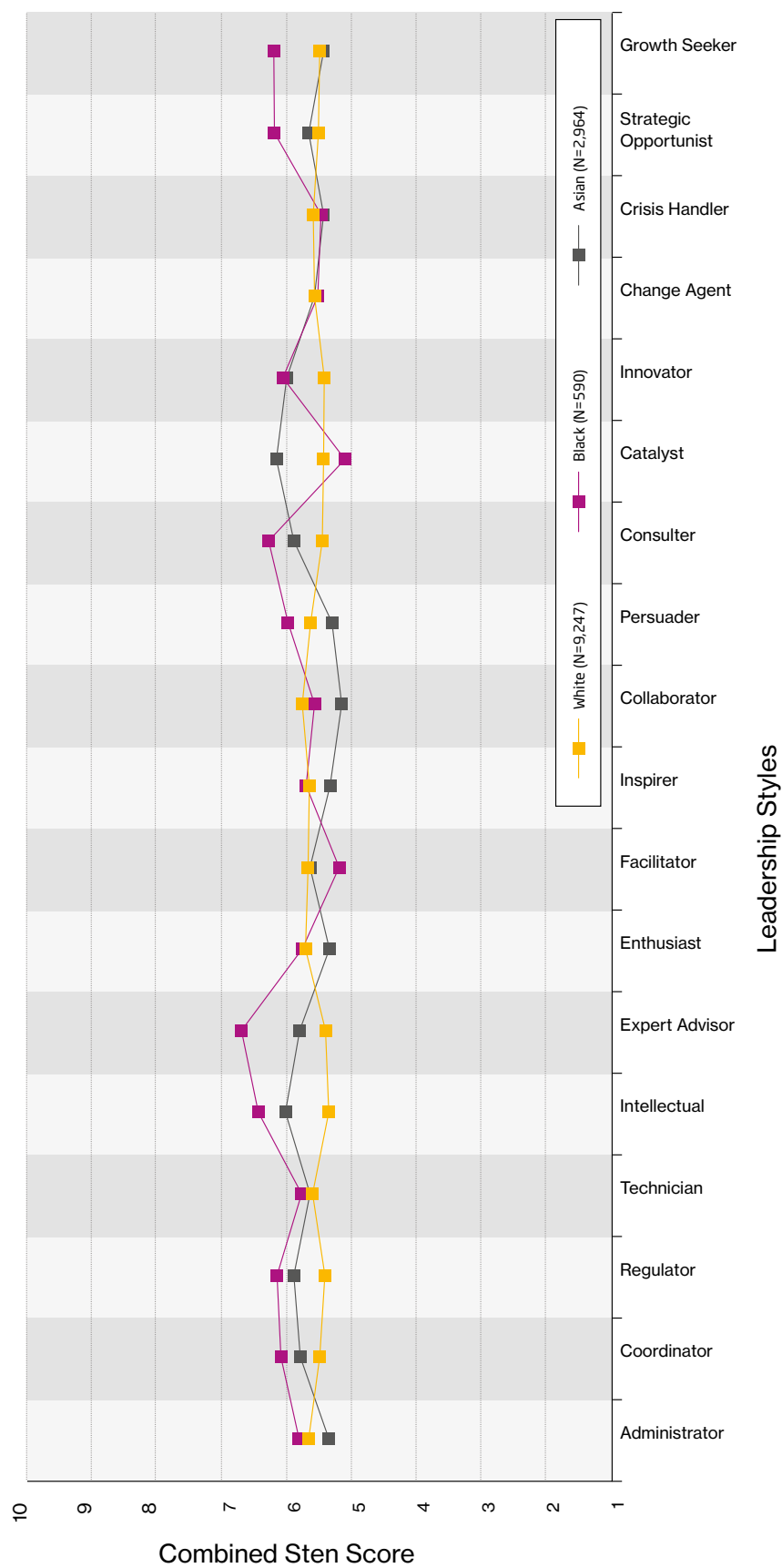


Mean scores for male individuals (N=8,482) were compared to mean scores for female individuals (N=5,164).

Differences ranged from non-existent to small.

The largest difference was on Administrator where women rated themselves, on average, .83 of a Sten higher than men, with all other differences less than .72 of a Sten.

Ethnicity Trends International - Sten Profile (N = 13,646)



The White group (N=9,247) was compared to Black (N=590) and Asian (N=2,964) groups in terms of their mean scores. 15 of the 18 Leadership Styles showed no appreciable mean differences between the three groups.

The Black group rated themselves moderately higher than the White group on Expert Advisor (1.30 of a Sten higher) and Intellectual (1.09 of a Sten higher). The Asian group rated themselves moderately higher than the Black group on Catalyst (1.06 of a Sten higher).

No large differences were found.

6.0 References

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