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Effectively Measuring the ROI of Training

Annually, companies spend up to \$100 billion a year on training.1 However, many fail to maximize impact as they lack an effective method for measuring success. In a 2010 McKinsey study, only one quarter of respondents experienced a noticeably positive effect on business performance following their training investment.2 Organizations understand the value of training, and its ability to improve employee productivity and performance, but rarely evaluate their programs in order to make improvements and fundamental changes.

$$ROI = \frac{Benefits - Cost}{Cost}$$

Donald Kirkpatrick, a retired professor from the University of Wisconsin, developed the world's most widely utilized model for evaluating training. Kirkpatrick's four-level training evaluation model (reaction, learning, behaviour and results) can help leaders understand the different levels of training evaluation. Analyzing the results or Return on Investment is the most comprehensive level of analysis and is crucial for determining training effectiveness. ROI compares the cost of the training program with the actual monetary benefits that are realized from it. Benefits are determined from the returns or savings the company realizes as a result of the implementation of the training program. To determine an accurate figure, bottom line results that are directly fimpacted by training must be analyzed.

Measuring ROI may not be possible for all training programs in all organizations, but leaders should understand the costs and benefits associated with their programs in order to properly evaluate their effectiveness. Organizations can use data collection to create measurable results based on four categories for measuring performance objectives: output, time, quality, and financial. The best-designed training programs should produce high quality results for each objective.

When designing a training program and its evaluation procedure, the Decision-Based Evaluation model (DBE) is an extremely useful tool to identify the most critical evaluation focuses for determining success. The DBE model begins with identifying a target for the evaluation, which refers to the information we wish to acquire from our evaluation. The three possible targets include trainee change, organizational payoff, and program improvement. Next, a specific focus for the evaluation target is determined. For example, the model could be measuring changes in behaviour or motivation. The final step of the model is using the target and focus to identify the best evaluation method. The DBE model is an excellent way for companies to gain a quick understanding of the value they wish to receive from training feedback and the specific measurement focus of their ROI.

ROI in Practice

Developing the talent pool is an essential aspect of managing human capital in an organization. In order to develop, manage and leverage the knowledge, skills and abilities employees have, it is crucial to develop and measure a training and development program. African Barrick Gold (ABG), a successful gold producer in Tanzania, places training and development at the heart of the business strategy. ABG believes that their people are a significant factor in creating a competitive advantage. They feel that an organization should utilize a dual approach of simultaneously placing management focus on both human and financial capital. At ABG, a crucial pillar of human capital management is the goal to increase ROI on training programs. They determine the ROI of training for an employee based on an estimate of their growth and their potential to add further value to the company.

"A crucial piller of Human Capital Management is the goal to increase ROI on training programs."



The key to their training investments is built around ensuring that the cost of training does not exceed the growth in human capital value; if costs exceed benefits there will be a negative ROI. The growth of human capital is measured by the increase in value the employee adds to the company over time. If training money is wasted on poor hires, there will be a decrease in human capital value and the return on investment will be weak. Training costs for a 200-employee organization and the training expenditure wasted on mishires is demonstrated in the example below.

Job Title	Number	Avg. Salary	Hourly Rate	Total Salaries and Wages
President / Senior Directors	1	N/A		
Number of people at VP Levels	5	\$100,000	\$48.08	\$500,000
Number of people at Senior Management	15	\$80,000	\$38.46	\$1,200,000
Number of people at Mid Manager Level	25	\$65,000	\$31.25	\$1,625,000
Number of people at Junior Manager Levels	0	\$50,000	\$24.04	\$0
All Others	154	\$55,000	\$26.44	\$8,470,000
Total Staff	200	1112 111		\$11,795,000
Average Hourly Rate			\$28.35	
Training Hours for new employees (6 months)			Costs of Training	
Senior Managers	160		Average new hires yearly	4
Junior/Middle Managers	80		Average training wages for new hires	\$109,633.0
Other Employees	50		Additional training costs	\$50,000.0
Average Training Hours	97		Total Training Cost	\$159,633.0
			Average % of mishires a year	209
			Average mishires	
			Training wages wasted on mishires	\$21,926.6

The ROI of Blended Learning and the Drive Results with Talent Workshop

Predictive Success utilizes a blended learning approach of face-to-face interactive training, remote coaching, and online resources for organizations to expand their knowledge. One of the most significant challenges that organizations encounter with their training programs is selecting and employing a method of training that is effective for all employees and appeals to all types of learners. There are several possibilities companies can choose to execute when developing training programs including on-the-job training, lecture-style classroom training, elearning, case studies, and simulations. Studies have found that combining different aspects of each style of training can be

Predictive Success leverages the advantages of the blended approach by employing an initial two-day learning TM program in the classroom, The Predictive Index Becoming a PI Practitioner Workshop, to provide a clear understanding of the Predictive Index Behavioural Assessment and how to analyze the behavioral patterns. The program is complemented with e-learning modules prior to and following the training course. The two-day workshop has produced substantial results; surveyed organizations found a 66% reduction in hiring time and reductions in turnover, in one case, to 0%. An important aspect of blended learning is that it appeals to a variety of individuals with different learning methods. Some may thrive in the classroom environment whereas others may prefer working independently and at their own pace. A McKinsey article shares that when creating and implementing training programs, "too many organizations we come across rest on the assumption that one size fits all". 6



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The ROI of the Drive Results with Talent Workshop





Introduction

The Predictive Index Behavioural Assessment™ as presented by Predictive Success poses an opportunity for any business to harness their most competitive advantage – their people. It provides the scientific foundation to make people-related decisions, delivering valuable insights into workplace behaviour and skills. By aligning the correct people to their position, you empower your company to maximize their human capital assets and "get the right people in the right seat on the bus, at the right time."

Predictive Success Corporation takes this ideology and goes one step further. The Predictive Index Becoming a PI Practitioner™ Workshop offers the ideal environment to train you and your company's senior staff, transforming scientific theory into concrete action plans for improvement in any department, at any level, of your company. The highly interactive workshop setting provides a language which facilitates people-related discussion as experienced consultants help interpret and apply the insights gained from the PI Behavioural Assessment™. Through the course, analysts learn how to incorporate theoretical knowledge into daily decision-making processes and discover the many ways that the PI Behavioural Assessment™ can improve the performance of your business.

The Business Case

The Predictive Index Behavioural powerful tool; the statistics of past clients speak for themselves. 67% of companies using the PI Behavioural Assessment™ tool **expect a growth of +8**% within the next year.

Before [taking the Drive Results with Talent Workshop], training was kind of left aside. No one really sat down for performance reviews."

- PI Certified Analyst

Past clients have experienced immediate bottom-line results, including 30% faster time to hire, 23% increase in sales, and up to 20% reduction in turnover. As a result, 28% of Canada's Best Managed companies use the PI Behavioural Assessment™ not only for hiring decisions, but for varying purposes such as conflict resolution, team building and succession planning.

With such an effective and user-friendly tool as the PI Behavioural Assessment[™], you may ask, "Why do I need to take the workshop?" Nevertheless, Predictive Success highly recommends all client employees directly engaging with the PI Behavioural Assessment to take the Drive Results with Talent Workshop. The purpose of the 2- day workshop is to supplement the personality assessment tool with a customized, highly interactive training program to teach managers how to not only use the PI Behavioural Assessment[™], but the many ways to improve your business practices. This white-paper aims to examine the after-effects of the workshop, and how training analysts have used their newly acquired knowledge and practices with the PI Behavioural Assessment[™]. It will look at tangible and intangible results from both the company and the individual level, exploring the analyst's own professional development as well as their business environment before and after the workshop.

Answering broad questions such as, "In which ways did the company benefit from having implemented the PI Behavioural Assessment™ and have the workshop?" to more personal questions like, "Have you seen a change in your leadership skills?", this discussion aims to quantify concrete results of the return on investment after taking the Drive Results with Talent Workshop.

Who was interviewed by CREO Solutions to determine the ROI of the Becoming a PI Practitioner™ Workshop? The certified analysts who participated in the interview took the two-day seminar in 2012. They represent a variety of different industries and sizes, centered mostly around Ontario.

- Organizations from which these analysts were interviewed include:
- A leading North American ingredient manufacturer & distributor
- The Canadian division of the largest multi-national academic publisher
- Canada's second largest manufacturer and distributor of tobacco products
- · A leading manufacturer of deli foods and groceries

The Research

In order to determine the exact impact of the Drive Results with Talent Workshop, CREO solutions conducted interviews with previously trained analysts who had taken the workshop during 2012. The interview was broken down into four main sections: broader questions, discussing the ways in which the analyst's training benefited the company and having implemented the Predictive Index Behavioural Assessment™; company-specific questions, targeting choices in the business environment before and after the training, such as attrition, hiring time, and employee performance, individual-specific questions, grasping the differences perceived in leadership skills, confidence, and approach to making decisions; and, finally, future-based questions related to next steps given the effectiveness of the PI Behavioural Assessment™ and the workshop.

CREO Solutions 2013, Member of the Queen's University Commerce Society

Analyzing the Results

While all the analysts agreed that the Predictive Index Behavioural Assessment™ alone was extremely accurate and directly applicable to their people-related needs, many of them also expressed their opinion that the workshop was a necessary complement to the tool.

"The PI Behavioural Assessment™ allowed analysts to gain more in-depth insight into a candidate's personality when making hiring decisions," said one PI certified analyst. Many analysts said that overall, the behavioural patterns increased efficiency within the workplace when used with both potential employees and current employees. Performing the PI Behavioural Assessment™ on current employees also highlighted areas for improvement.

Several analysts went on to say that the Becoming a PI Practitioner™ Workshop helped to transform the theoretical knowledge into explicit behaviour. The workshop was especially beneficial for reading and understanding the behavioural patterns along with personal development.

Company-Specific Results

The "before" snapshot of a typical company prior to having certified analysts illustrates an environment where human capital was not treated as a company asset. As one analyst puts it, "Before, training was kind of left aside. No one really sat down for performance reviews." After taking the training, the analysts perceived almost immediate benefits; a valuable tool for the sales force, interpreting the behavioural patterns allowed them to understand more quickly if someone is suited to the job.

Figure 2: Proven Benefits from Becoming a Pl Practitioner™ Workshop

- 10-15 days faster per posting
- Reduced hiring process by 66%
- Reduced turnover, in one case, to 0%



This, in turn, helped those making the hiring decision to eliminate the candidates not in the running, and reinforced instead the stronger and more qualified candidates. If the PI Behavioural Assessment™ was administered before the interview, their results helped streamline the interview process; for example, aligning appropriate interview questions based on that particular candidate's behavioural pattern. By giving good insight into strengths and tendencies, the workshop helped to change the internal hiring system of many analysts' companies.

The result? After taking the workshop, one analyst experienced 10-15 days faster per posting, while another analyst saw the hiring process reduced from three months to one month.

Categories of perceived benefits from the Drive Results with Talent Workshop

Company-Specific Individual-Specific

- Faster interpretation and analysis of PI Behavioural Assessment™
- Improved interpersonal communication
- Common language used for better description of the business environment
- Better adept to handle conflict resolution,
- Streamlined interview process- stronger candidates and customizing interview questions to address particulars of a candidate's behavioural pattern

Individual-Specific Results

Many of the company-related benefits resulting from the workshop were expected, given the direct business application of the training. What was more unexpected, however, was the personal development many of the analysts experienced during the seminar.

Many of the analysts described a better understanding of the PI Behavioural Assessment™ on a personal level; as one analyst said, "If I'm having a challenge, I can better communicate to them through their behavioural pattern. I know how they need me to talk to them." Not only did the training help their comprehension, but the language used while discussing potential employees became more descriptive and vibrant.

"After taking the PI Behavioural Assessment™, I realized that I was in the right position." As another analyst pointed out, the training helped develop their own confidence and approach to their colleagues. "I feel more qualified to have objective conversations with both employees and managers, with respect to their demonstrated behaviours at work. I also have insight with how to communicate this information differently with employees based on their behavioural pattern."

"If I'm having a challenge, I can better communicate to them through their behavioural pattern. I know how they need me to talk to them."
-PI Certified Analyst



Many analysts felt more confident in communicating PI Behavioural Assessment™ results' importance to senior management, not only in respect to hiring, but with conflict resolution and employee performance development. One analyst mentioned, "Conflict resolution is always something I have struggled with, due to my personal behavioural pattern. Taking this certification has equipped me

with understanding and skills to personally develop in this area significantly." Even if they weren't consciously applying the processes learned from the training, the analysts became self-aware of the behaviours and motivating factors of themselves and their critical factors.

The Drive Results with Talent Workshop helped the certified analysts to understand hiring candidates and making the best decision. It helped them avoid poor hires by ensuring that their interview is consistent with their PI behavioural report. Aside from hiring, it promoted better collaboration and better management. Others reported improved succession planning – as people leave the organization, the PI Behavioural Assessment™ helps to identify who fits best in the new role. The analysts became more adept at defining themselves, who they are, and surrounding themselves with the right people doing the right job.

They looked forward to hiring a team that is more connected to exactly what they were looking for.

Summary and Conclusion

All the analysts who were interviewed agreed that the Predictive Index Behavioural Assessment™, along with the Drive Results with Talent Workshop, provided numerous benefits for their companies. Not only could they speak in a language which facilitated discussion around the hiring process, but they felt more adept at resolving issues with existing employees and building better teams. It gave new processes which, once implemented in the company, often shortened the hiring time and increased overall business efficiency. Furthermore, many analysts were surprised by their own personal development in confidence and leadership skills. In consideration of all the benefits for the company and the individual, we conclude that the workshop is of innumerable value and helps integrate the PI Behavioural Assessment™ tool. The number of certified trained employees should be proportional to the number of people who will be engaged with the PI Behavioural Assessment™ tool; as one analyst points out, "If [the company] had only sent one person, it would have had no value."





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Predictive Success Corporation Customer Research

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Table of Contents

EXECUTIVE SUMMARY	3
RESEARCH OBJECTIVES	5
SURVEY METHODOLOGY	5
PREDICTIVE INDEX ASSESSMENT – SURVEY RESULTS	6
Why PI?	7
Top Challenges for Businesses Today	8
Top Applications of PI	
Job Pattern	11
Applying PI Behavioural Assessment™ to Organization's Developmer	ıt Plan 11
Overall Impact of PI Behavioural Assessment™ implementation	12
CHALLENGES IN MEASURING ROI (move to later in the report)	
Limitations of our ROI calculations	
FUTURE RESEARCH	
FINAL THOUGHTS	13
APPENDIX A: SAMPLE QUESTIONNAIRE	20
APPENDIX B: LIST OF PARTICIPANTS	21

EXECUTIVE SUMMARY

Since 1955, the PI Behavioural Assessment™ tool has been used by companies world-wide as an in-house management tool to help develop leaders and strengthen organizations. Predictive Success Corporation

provides companies with a high quality analytical assessment tool, training and education, as well as consulting services. With their product and services used in 6000 large, medium, and small businesses coupled with the growth in demand for organizational development products, Predictive Success is looking to better understand the impact their product has on customer satisfaction and the return on investment received through an organization's use of the Predictive Index tool retainer which consists of 50 PI Behavioural Assessment™ for one fixed price. Predictive Success Corporation retained Queens Business Consulting (QBC) to conduct market research to assess the experiences their clients have had using the PI Behavioural Assessment™ tool.

The survey results helped illustrate the many reasons for choosing to implement PI Behavioural Assessment™ by different organizations. Although reasons did vary, the top reasons for choosing the PI Behavioural Assessment™ over competitor products were as follows: recommendation from past users, the ease of use of the tool, the sense of security offered by the accuracy of results, the value of the retainer pricing model, and the strong customer support services that complement the product.

Application and level of integration of PI Behavioural Assessment™ varied across organizations. The major areas of use for the PI Behavioural Assessment™ were assessing potential hires, identifying job requirements, securing task-abilities matches, managing conflicts, managing promotions, and the designing of effective training sessions. A key finding of the survey identified that organizations that are better able to apply the PI Behavioural Assessment™ product to different business functions the more satisfied and the higher the value they placed on the effectiveness of the tool. Many current users surveyed believed that they had not yet experienced the full benefits of the PI Behavioural Assessment™ product and services because it was not fully integrated into their business in areas such as in decisions making, leadership development, or overall development plans. This is not to say the client is dissatisfied since the satisfaction level was 100% of the clients surveyed but rather this

presents an important business implication to Predictive Success Corporation who has an opportunity to develop strategies for easier implementation of the PI Behavioural Assessment™ tool into multiple facets of their client's business practices.

All users of the PI Behavioural Assessment™ felt their organizations received significant value from using the tool; however few were able to quantify their returns with any level of accuracy. Return on investment (ROI) is a difficult measure to obtain based on current organizational practices in measuring key indicators of their business and internal functions. Future experimental research may be required in order to determine an accurate and reliable ROI assessment. Determining the key measures to quantify the return on investment will have to be a joint initiative between Predictive Success Corporation and their clients. Together key measures can be obtained accurately and reliably to calculate the quantitative return on investment received by the different organizations.

The overall value of PI Behavioural Assessment^{\mathbb{M}} is seen through multiple departments and levels of an organization. The tool's successful use in different industries reflects on its flexibility and overall impact on organizations. The number of clients using the PI Behavioural Assessment^{\mathbb{M}} as a result of referrals speaks to the satisfaction levels and value of the products and services in many organizations.

RESEARCH OBJECTIVES

This engagement required the completion of market research to determine customer satisfaction with the PI Behavioural Assessment™ tool. The objectives of this project were to assess the value added by using the PI Behavioural Assessment™ within the organization and to analyze data to create a quantitative metric of return on investment to be used for marketing purposes.

SURVEY METHODOLOGY

As many of the Predictive Success clients are dispersed around the country, data was collected using phone interviews conducted by Queen's Business Consultants. A contact list of 50 current customers was provided by Predictive Success Corporation with the intention of conducting 15 to 20 interviews. The client list provided contained clients of different positions, industries, and company sizes. In the end, 12 interviews were conducted successfully.

The survey was developed by Queen's Business Consultants and approved by Predictive Success Corporation. A copy of the survey has been provided in Appendix A. The survey had many open ended questions to allow for more customer feedback and input. Consultants conducting the interview were prepared to pursue quantitative data by asking follow up questions to responses.

The phone interview results were recorded by the consultants. Interview responses were then aggregated and a value assessment of the PI Behavioural Assessment™ tool for organizations was conducted.

PREDICTIVE INDEX ASSESSMENT - SURVEY RESULTS

This market research consisted of current Predictive Success customers of various industries and sizes. The uses and extent of implementation of the tool varied across each individual organization. Some organizations used it only in hiring practices while other used PI Behavioural Assessments™ in many areas such as coaching, conflict resolution, team building, etc. No matter how much or how little the tool was implemented within the organization, each customer stated that PI Behavioural Assessment™ tool was valuable to their organization.

The positive experience with the PI Behavioural Assessment[™] tool across the different sample customers speaks to the flexibility and adaptability of the tool into any organization. Industries studied in this survey included construction, food services, technology, pet food manufacturing, human resources consulting, etc. There was a 100% satisfaction rating of the product by all clients and of those surveyed, 67% of the companies using the PI Behavioural Assessment[™] tool are expecting on average a growth of approximately 8% within the next year, despite the economic times. This finding helps illustrate the positive effect that the PI Behavioural Assessment[™] can have on overall business development.

Motivation to turn to an assessment tool

According to the interviews, there are many key business challenges that cause organizations to turn to Predictive Success Corporation's Predictive Index Behavioural Assessment™ tool. The sample surveyed identified 4 key motivations for using the tool:

- · Need for better internal and external hiring decisions
- · High turnover rates
- · Sustaining a competitive advantage
- · Need to implement a performance measurement tool

Many small businesses have used the PI Behavioural Assessment[™] tool as their HR function, in other words, use it as a method of outsourcing leadership and organizational development initiatives by using the tool to help identify strong leaders within their organization and when looking at potential candidates. These small businesses have used the PI Behavioural Assessment[™] tool as a method of ensuring quality hiring and leadership development without the incurring the costs of a full human resource department.

Why PI?

With a number of assessment tools on the market it is important to understand the reasons organizations have chosen to adopt the PI Behavioural Assessment™ instead of the competition. It is also important to note that the customer research identified that 20% of those surveyed had switched to using the PI Behavioural Assessment™ tool after using similar products offered by competitors. The interviews identified the following top reasons for choosing Predictive Success over the competition:

Recommendation. 45% used the PI Behavioural Assessment™ based on recommendations from colleagues that had great experiences with the tool. This finding suggests that word-of mouth is an important marketing channel and a reflection of the overall customer satisfaction with the product - One organization stated: "Those who have used the tool have always commented on its accuracy and great personal support from the sales rep and the website!"

Ease of use. Recurring comments about the PI Behavioural Assessment™ product emphasized how easily the tool can be used and applied by all individuals in the organization. It was also identified to be a very user-friendly tool in organizations who have not previously adopted any type of assessment before. The ease of use quality of the application provided these organizations with the necessary support and guidance to begin implementing this type of tool into their organizational practices. - "We were really attracted by the simplicity of it. As a broad based organization it is very important to have an intuitive tool...The text is also written in a very positive way, and good for non-critical supportive feedback."

Accuracy of results. All those surveyed, indicated that they felt the individual assessments are accurate reflections of different personalities and work behaviours and preferences. The accuracy and reliability of the results of the PI Behavioural Assessment™ allowed for more objective and efficient decision making across the sampled organizations.

Value from a cost perspective. Unlike the competition, respondents indicated that PI Behavioural Assessment™'s cost structure offered superior value. The format of the PI Behavioural Assessment™ retainer allows the instrument to be used with more flexibility, depending on the needs of the organization. One organization indicated that the cost structure gave them the opportunity to use the tool in different areas of their organizations risk-free.

The pay-per-retainer versus the pay-per-use structure also allowed them to use the application with more individuals within their organization. - One customer commented that the pricing structure of the PI Behavioural Assessment™ retainer "helps give us small organizations a leg up!".

Strong customer support. A positive and consistent comment of Predictive Success Corporation is strong customer support. Many clients commented on the helpfulness and high quality of the PI Behavioural AssessmentTM and service that comes as part of the retainer. Clients stated that this was one of the most important benefits to using the PI Behavioural AssessmentTM and what made it stand out ahead of the competition.

When reflecting on their decision to use the PI Behavioural Assessment™ one company stated that "We simply found the PI Behavioural Assessment™ to be a superior product."

Top Challenges for Businesses Today

The survey identified the top 3 business challenges faced by organizations today. Having a better understanding client challenges can help Predictive Success develop their tools and services to help clients overcome these key challenges.

1. Changing economic conditions. With the recent changes in the economy, 67% of companies surveyed are investigating better ways of adjusting to changes in consumer demand for their product or service. In many cases, businesses have had to reassess their organizational structure

in order to determine areas for cost cutting. With the help of the the Predictive Index© assessments, specifically the Job Pattern™, organizations were able to adjust for the changes. Predictive Success has helped save costs by aiding with retention of good hires, the creation of more productive work team and environments, and creating overall development plans based on Predictive Index© assessments.

A large service company reflected on the impact of the Predictive Index© assessments on their business and stated: "we saved a lot of money in terms of not having to rehire new people; we were able to focus on reallocating our resources."

2. Recruitment and Selection. Recruitment and selection were a top business concern for 58% of current PI Behavioural Assessment™ users. Hiring and attracting the right people is an important part of a successful organization. Businesses are investigating the best ways of hiring the right people for positions within their organizations which allows for better productivity.

Many business analysts are preparing for increased labour shortages as the current "boomer" generation begins to retire and the demand and productivity of the economy is stronger than the available human capital resources. The threat of future labour shortages and the increased need to focus on employee retention strategies indicate that the PI Behavioural Assessment™ is appropriately positioned for future growth.

In one example was the PI Behavioural Assessment[™] tool was found to be extremely valuable in making objective decision making in a promotion situation for which there were two eligible candidates and each was supported by different members of management. The PI Behavioural Assessment[™] allowed the hiring team to look at the objective results of the PI Behavioural Assessment[™] of the individual's strengths and weaknesses against the position requirements. Not only was the team able to make a sound decision that minimized the power of personal bias, they were also able explain their decision to the individual who did not receive the job.

3. Expense Control and Cost Reduction. Companies are looking for strategies to survive the recession and continue to drive margins. For 42% of the companies surveyed, expense control and growth of margins was one of their top business challenges today. The surveyed organizations have invested and continue to invest in the Predictive Index® assessments as a means of assessing the value of different positions and practices within their organizations. One investment company uses the Predictive Index® assessments as a way to assess the potential value of investments by using the PI Behavioural Assessment™ to assess the abilities of the management team they are looking at investing in.

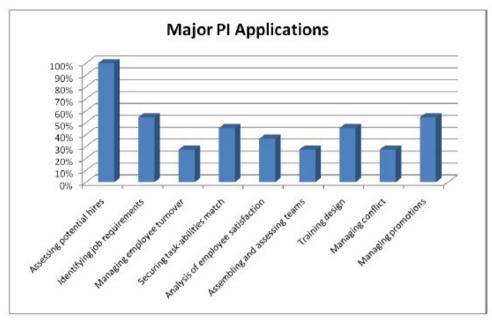
Top Applications of the Predictive Index® Assessments

A survey of customers over a range of industries and of different sizes has identified major areas of use of the tool. It was found that most of the firms, initially acquire the Predictive Index® assessments to use in a hiring process, more precisely to assess potential candidates during the final stages of recruitment; however, a range of applications expands as new customers become more familiar with the application, learn about other possible applications, and become convinced in the tools efficiency and accuracy. Users tend to use the tool for more applications as their experience with the tool continues. Results show that the long-time clients who have been able to use PI Behavioural AssessmentTM in many facets of their organizations have extracted a fuller overall benefit and satisfaction level of using the tool.

Although there was a diverse sample of organizations investigated, there were some key applications of the Predictive Index® assessments to different business practices. The assessments used in 100% of the companies for recruitment and position fit analysis. Much of this was facilitated through the Job PatternTM which allowed clients to identify key functions in their business and key attributes of the individual filling that position in an objective manner. More analysis on the specific aspects of the Job PatternTM is outlined later in this document.

Exhibit 1: Major Predictive Index® assessment Applications, indicates the top applications of the PI Behavioural Assessment TM tool across the organizations surveyed.

Exhibit 1: Major Applications



The graph above illustrates that there are a number of applications, other than hiring and recruitment, of the Predictive Index® assessments. The number of uses is positively correlated with the length of experience with the tool. The assessment also indicates that identifying job requirements was the next top application at 55%. 27% of companies use the PI Behavioural Assessment™ for securing a task-abilities match and 45% apply it for the training design. It is used for the analysis of employee satisfaction (36%), assembling and assessing teams (27%), training design (27%), and managing conflicts (46%). 55% of companies use the application in managing promotions.

These numbers suggest that marketing efforts should, in part, be directed at showing potential customers a whole range of possible applications of the PI Behavioural Assessment™. A marketing strategy is to encourage current users to extend the application of the Predictive Index® tools across the organization. This can help improve customer's overall satisfaction rating, as it was noted earlier that those that extended the use of their product achieved a higher level of overall satisfaction and perceived impact of the tools. The number one application of assessing new hires should not be overlooked, however, as this will likely be a key attracting feature for new clientele. This finding may indicate the potential to push accessory products of the Predictive Index®. Creating accessory programs such as a measurement tool may help further promote Predictive Index® assessment integration within organizations and also another revenue source for Predictive Success Corporation.

Job Assessment™

72% of PI Behavioural Assessment™ users also invest time into the Job Pattern™ tool. All of those using the Job Pattern™ have found it to be a very effective tool. This tool is often used for hiring purposes within the organization as it helps define position requirements. The Job Pattern™ has also been applied in succession planning and career development as a helpful means of measuring the fit of an individual to a specific position. Lately the Job Pattern™ tool has been increasingly useful in aiding organizations assess the value of different positions within their structure and has been effective at streamlining different organizational structures and processes.

The ability to assess the quality of the match between a position's demands to the personality and work practices of an individual has been attributed to helping reduce turnover in organizations.

Applying the Predictive Index Behavioural Assessment™ to Organization's Development Plan

55% of those surveyed use the PI Behavioural Assessment™ as a critical component of their organization development plan. It has been implemented in the following ways:

Helping grow organizational structure

Saving time and avoiding hiring mistakes

Used when considering promotions

Of those surveyed 2 companies identified that they did not currently use the PI Behavioural Assessment™ as a development planning tool but did understand there was value in doing so. One of these companies had only implemented the assessment in the past 2 years and felt it was too early in the product's implementation within their organization to apply with different development initiatives. The other company, on the other hand, has been using the tool for over 35 years but only applies the tool in recruitment and hiring aspects of their business. This long standing client is a user who has yet to explore all the applications of the PI tool despite a continued subscription to the product. This client may indicate a whole segment of current users who have yet to expand their use of PI Behavioural Assessment™ beyond their initial use for which the product was purchased. This is perhaps an area where Predictive Success Corporation can investigate these clients further in order to help them implement the tool in more areas of their business with continued use.

Overall Impact of the Predictive Index® implementation

All the customers surveyed believe that the Predictive Index® has made a positive impact on their organization. Most of the impact results are from their own perspective and observations of company productivity and practices. Some of the positive impacts of implementing the Predictive Index® have been seen through:

Reduced turnover levels. Reducing turnover allows for less hiring and rehiring cost incurred by companies. This turnover reduction has been attributed to the tools ability to help better define job requirements and match the right individuals with the right positions which allows for a more objective decision making process. The tool is also able to identify personality issues that may need further investigation before hiring. Although a reduction in turnover was a key impact of the tool, none of the organizations were able to give the exact amount turnover had been reduced. This result was partly because some companies do not measure turnover regularly as well we also suspect the format of a phone survey may have been too informal for people to quote exact numbers that may be available to them with some searching.

Employee Satisfaction. Some organizations have noticed increased employee satisfaction. This increase is largely attributed to the ability for organizations to provide employees with a working environment better suited for their needs and skills.

Improved team dynamics. The tool has helped develop and build certain work groups and teams across organizations. This is seen through better management selection with the PI Job Assessment™ and an increased awareness amongst managers of the needs of their workers. In most cases, this increased awareness allowed for more effective management teams and better communication practices

between management and subordinates. These adjustments and education improved group productivity and reduced conflict among members. The Predictive Index Assessments™ have also been used to help discover the effectiveness of the different members of various teams across organizations. The assessment tool helped identify those who were and were not working effectively within the different teams. From this the organization was able to investigate and develop profiles of the right individuals for various tasks around the organization. The result of highlighting the "weaker" links within specific project teams allowed for reallocation of the individual and increased productivity and satisfaction levels among the remaining team members. The emphasis of this particular organization was not that the weaker link was a bad worker, but simply the worker was not excelling in a particular group environment and the lack of productivity which, in turn, affected the overall team's output.

Better Communication. Companies who use the PI Behavioural Assessment™ as a tool for managers who are overseeing a team have noticed that it allows them to communicate better with one another. Better communication has translated into better group dynamics and built stronger work groups and teams.

These benefits have all been observed or felt by those interviewed from the various organizations. None were able to deliver concrete quantifiable results (such as turnover was reduced by 10% since the implementation of the Predictive Index®) as many of these companies currently are not measuring these types of indicators or were uncomfortable suggesting that these changes were a direct result of the implementation of the tool.

CHALLENGES IN MEASURING ROI

It is important to note that the original purpose of this survey was to gather quantifiable data of the return on investment different clients have achieved since the implementation of the Predictive Index® tool. It was clear, once interviewing began, that companies do not track all the information to assess ROI. Part of the reason for the lack of quantifiable data is that several factors need to be considered in the calculation such as employee productivity, economic conditions, group dynamics, etc. hence calculating a reliable return on investment assessment of this tool is quite difficult. Different organizational, political, and social factors can contribute to the performance of an organization so it is difficult to separate effects of implementing the Predictive Index® even if one has all the data needed.

Changes in the economy, environment or an individual's behaviour (such as when private matters begin to effect productivity levels) can affect the monetary returns an organization receives from different investments. It is also difficult for organizations to obtain objective numbers for changes in employee

satisfaction or the productivity measures of various departments and workers across an organization or to develop causality between the multiple variables. Many companies are only now beginning to track this type of data on a regular basis. Without these measures already being part of an organization's current practices, discovering the ROI of the Predictive Index® tool cannot accurately be determined. Many of those surveyed were not able to give a specific measure for the returns they had received but did identify that they personally all recognized the value in the product based on their perceptions and experiences with the tool's implementation in their organization.

Limitations of our ROI calculations

According to an article written by Dr. Laurie Bassi the current economic situation will also put more emphasis on the necessity of developing measurement capabilities for the value of human capital investments. The problem persists that very few companies have been able to adopt new measuring systems that are tailored to the key areas that drive their companies' business. Therefore few are able to truly quantify the returns they have received from the implementation of different products and systems such as the Predictive Index® within their organization. 2

Although measuring the return-on-investment (ROI) of different tools in organizations is becoming increasingly important, there still remains a bit of a mystery on how to achieve the measurement. ROI is a traditional financial measure based on historical data. The formula, taken from Investopedia.com is as follows:

(gain from investment - total cost of investment)= ROI Total cost of investment

The total gain from investment represents any money saved or made by the organization or anything that adds to the bottom line. The total costs are the time, training costs, direct product costs, implementation costs, etc. of the product. The total benefit and total costs seem intuitive, however once trying to isolate the costs and benefits is very difficult. Organizations will measure their return-on-investment of the Predictive Index® differently based on key metrics for the organization. Many organizations are finding it difficult to isolate the costs and factors that make up the components of this equation. 3

In order to achieve an authentic ROI assessment of this tool companies need to focus on measuring productivity improvement, cost savings, quality changes, etc. In a recent study by Deloitte and Touche it was found that 80% of companies who are currently measuring ROI of HR functions within their organizations base most of a product's value on intuition, perception, and observation. Of the same group, 85% of the time they run programs without formal measurements or evaluations in place to measure the tools effectiveness. These findings are consistent with the results of this study. When discussing the ROI measurement process, Dr. Jack Phillips of the ROI Institute emphasizes the importance of isolating the effect of the HR intervention as calculations are being made. Unless a clear and indisputable link can be established between the intervention and the saving, the methodology will lose credibility. 4

Prior to conducting the survey it was expected by Predictive Success Corporation and the consultants that few companies would measure all components necessary to evaluate an ROI metric.

The survey revealed that although some companies do evaluate some level of employee performance and/or satisfaction these records are difficult to use in ROI assessment. The difficulty arises as companies do not currently measure all the major entries to assess the ROI of an HR tool and indicators such as performance and satisfaction are often incomparable among companies because the methodology used to collect them differs significantly across organizations and their different departments. The lack of accurate measurements taken in organizations has significant implications in determining the value of the Predictive Index® by Predictive Success Corporation. This also creates a need for a tool to enable managers to measure the effects of implementing new HR policies against key performance indicators. Such a tool has a potential market both to big firms, where savings on HR can be valuable, and for smaller firms who may not have the HR department or resources to keep up to date on measuring these types of returns for their business.

FUTURE RESEARCH

The absence of reliable, consistent estimates provided by clients indicates several aspects that should be taken into consideration in the design of a more rigorous ROI study. First, ROI assessment of implementing the Predictive Index® will differ across different industries. This is due to the fact the benefits from implementing the Predictive Index® is different for different industries and even functions and departments in firms within one industry. There is no one universal ROI measure, however, estimating ROI across the same industry such as IT or marketing departments can be estimated.

ROI studies must be long term case studies, estimating changes in all possibly affected indicators. Indicators must have predetermined measurements in order to have quantifiable entries such as productivity, hiring costs, etc. The case study design can differ and can be designed as a longitudinal assessment5 or over a range of departments. In the longitudinal case study, all the baselines will be from the period prior to implementing the Predictive Index® in their HR policies. Then, when the tool is introduced, those indicators should be measured regularly for a longer period (1-2 years) to give insight into the long-run effects of implementing it. As another option, two identical branches of the same company implementing the Predictive Index® in one of them and using the other as a control group can be assessed. Changes in the indicators over 1-2 year period should be recorded, and the difference among two branches analyzed to result in an ROI estimate.

Of course, there are advantages and disadvantages to both suggested designs. When using time as control variable, changes in one firm's (or department's) performance can be estimated, this contributes to results' validity. However, over the measurement period, there might be other economic trends affecting employee performance which might be difficult to separate. When using an identical branch as a control variable, a study requires less time, but there might be different trends affecting different branches. It is also worth noting that a cost of such a study is relatively low for Predictive Success, as it would only involves constructing a list of indicators and regular (monthly) entries into that list. Most of the companies do not measure key HR indicators (as found by present survey) so they might tend agree to participate in such a study which will be beneficial both for the organization and Predictive Success Corporation.

Although the ROI calculation is reflective of the value received through the adoption of the Predictive Index®, it is evident that the information to achieve such a calculation is not currently tracked by the majority of organizations. Without clear and reliable measures, estimates of ROI will likely not be of real value or accuracy.

FINAL THOUGHTS

It is evident with the overall satisfaction and high amount of referred users of the Predictive Index® retainer that the assessment tool is very valuable and practical to any organization. The value of the tool is achieved through the perceived organizational improvements experienced since the implementation of the tool as well as its overall accuracy and effectiveness in bringing a mutual understanding of the organization's dynamics. The PI Behavioural AssessmentTM allows organizations to talk in a similar language which develops cohesion and an understanding the different needs of the business as well as the individual workers.

Currently, the value of the investment is identified but not measured by the majority of the organizations. None of the companies surveyed were able to create direct links of the perceived value as a quantifiable return-on-investment measure. Part of this result is due to the ambiguity of the ROI calculation. Providing users with key measurements to track the progress of the organization since the implementation of the PI Behavioural AssessmentTM may be a valuable add-on to the services provided by the Predictive Success consultants. This will help both Predictive Success Corporation and the individual organizations quantify the true value of implementing the PI Behavioural AssessmentTM tool across different teams and the organization as a whole. This may also help validate the cost of the investment on the overall business. One business studied was unable to renew their subscription for the next year because corporate could not understand the direct returns this tool provided. When speaking to the representative from the company, they indicated that they were "very pleased" with the product, and was "disappointed that [the company] are not renewing...The Predictive Index® was not very recognized within the corporation and by executives for its many strengths." Another group indicated that having a way to make an ROI assessment, guided by Predictive Success, will help increase the overall value of the product and the business case for the continued investment.

The value of the Predictive Index® was more apparent in small to medium sized firms who relied on its accuracy to help build their human resource capabilities. Small to medium sized companies were able to notice changes in their organization faster than the larger business groups. The smaller businesses surveyed seemed to be more heavily impacted by a wrong hire and therefore relied on the tool for attaining and retaining better personnel. Recruitment and selection should remain key benefits of the Predictive Index® in promotional initiatives. Small to medium sized businesses also do not like to deal with variable costs that would be incurred in a pay-per-use pricing strategy and were attracted to the Predictive Index Behavioural AssessmentsTM, in many cases, by the retainer pricing format.

The pricing strategy of the 50-PI Behavioural Assessment[™] retainer was a means of competitive advantage for the Predictive Index®. The pay-per-50 format versus the pay-per-use was mentioned as minimizing the risks associated with first time use and encouraged the organizations to apply the tool to expanded employee levels within their organization.

Another important competitive advantage identified by the surveyed clients was the unbeatable customer support received as part of the retainer. Client support was of high value adding feature of the Predictive Index® tool which encouraged first-time purchases and continued subscription to the product. This is a key attribute that has lead to a number of referrals and should remain an integral part of the overall Predictive Success product offering as it is a key driver of business.

The survey results found, for the most part, the longer an organization used the Predictive Index® tool, the more they were able to incorporate it across various business functions of their organization. With the extended use of the application across the organization, organizations reported a greater overall return on their investment than those who had simply implemented the tool recently and in only one aspect of their business practices. This finding illustrates an important marketing implication for Predictive Success Corporation. Although there are currently many satisfied customers with the product, it is clear that there is potential to grow the overall value achieved through the use of the product by continually updating current users on the various applications of the PI Behavioural Assessment™ to different functions within their organization. A group may start using the PI Behavioural Assessment™ as a means to improve their hiring practices, however with continued use and familiarity with the product, these organizations may find it valuable to extend to different application areas and uses for the product. This finding was also acknowledged when users were asked to rate the overall impact of the Predictive Index® tool on their organization. It is clear that although customers are very satisfied with the product they do not feel that they have been able to fully implement the Predictive Index® into their businesses practices. When asked to assess the value of the tool, many felt that there were more benefits to be offered, however their organization has not been able to apply the tool to achieve many of the full impact possible. This feedback indicates a need for Predictive Success consultants to focus on quiding users in the engagement of the Predictive Index® into the multi-functions of the different business areas in order to achieve the maximum benefits of the product.

There is evidence that the Predictive Index® assessments provide businesses with valuable insights and a tool that can be applied to multiple businesses and business areas. With the economic forecasts of an increased labour shortage the necessity of the Predictive Index® will be further enhanced. All customers surveyed perceived some benefit to their bottom line illustrated by their repeat subscriptions, satisfaction ratings, and referrals to others. The difficulty in developing or estimating an overall return on investment achieved with the implementation of the Predictive Index® lies within the current lack of tracking and measuring in these organizations. Because people are not tracking key measures on a regular basis nor can they attribute all change to the assessments, estimates of the returns are simply unreliable and inaccurate measures at this time. Using this unreliable data could tarnish the current reputation of Predictive Success Corporation. A more concrete set-up of performance measures and customer tracking as outlined in the ROI Measurement section will provide Predictive Success Corporation with more reliable and credible information on the returns achieved by the Predictive Index Behavioural Assessment™ users.

Appendix A: Sample Questionnaire

Name of Organization: Date Contacted: Date Interviewed: Contact Person:

Good morning / afternoon. My name is Elaine Richardson/Bulat Gainullin and I'm calling from Queens School of Business. I am a student in $4^{\prime\prime\prime}$ year/masters in managerial economics student in a consulting course. As part of our program, we work with clients on a variety of consulting projects. We are presently conducting a marketing research with Predictive Success Corporation who is looking to better understand the true value the Predictive Index® tool has added to their client's business. We were given your contact information by Predictive Success Corporation and hope that you could spend 10-15 minutes in answering our questions. For Participating in this survey, we will be sending you a \$10 gift card on behalf of Predictive Success. We would like to make sure you understand that all information that is given in this survey is confidential and our client will only see aggregate figures of our research.

Let's start with some quick background questions...

- 1. What title best describes your role?
- 2. What is your company's industry?
- 3. How many employees work in your company?
- 4. How many employees do you anticipate hiring in the next year? Will you be downsizing?
- How long has your current company been using the Predictive Index®/when did the company start?
- 6. How long have you been using the Predictive Index in total (including with previous companies)?
- 7. Was there a challenge your company faced that resulted in your decision to use an assessment tool?
- Why did you choose PI®?
- What level of management or staff within your organization have become a Certified Predictive Index Analyst?
- 10. How many trained analysts do you have within your organization?

For this next part we are looking to better understand some key measures your company uses....

- 1) How do you measure employee performance?
- 2) How do you measure job satisfaction within your organization?
- 3) What, would you say are the top 3 business challenges for your organization?
- 4) What are the top 3 applications of PI to your business?
- 5) What has been the impact of implementing the PI to each of these applications?
 - Are you able to provide a specific measure of effect such as the amount of money you have saved by...?

Do you also use Predictive Index for...

- Recruitment
- Job satisfaction
- Conflict resolution
- Productivity measures
- Coaching m- small way
- Team building

How has the PI® affected your business in these areas?

- 6) Do you use JobPRO? What results have you seen?
- 7) How does PI fit into your overall development plan?
- 8) On a scale from 1 to 10 how valuable was the Predictive Success tool in your organization?
 - 1 = no impact/did not meet expectations
 - 5 = met minimal expectations
 - 10 = huge impact/exceeded expectations 1 2 3 4 5
 - 1 2 3 4 5 6 7 8 9 10
 That completes our interview. Do you have any other comments or feedback about Predictive
- That completes our interview. Do you have any other comments or feedback about Predictive Success?

Thank you very much for participating in this survey....As I mentioned, our client will be using this data to assess the return on investment their PI users have received for promotional purposes. In addition, if you would like to learn more about other services and products offered by Predictive Success Corporation, we would be happy to have an associate contact you via email or telephone. On behalf of QBC and Predictive Success Corporation I thank you very much for your time!

Appendix B: List of Participants

Charles Tire & Wheel Co of Canada – Jeff Jackson

Hill's Pet Nutrition - Beverley Easthope

Flynn Canada Ltd. - Gerard Montocchio

K-Line – Charles Mossman

Microsoft Canada – Randy Lenaghan

Robinson HR Solutions Inc. – Brian Robinson

Rycott Food Service - Lester Hedgcock

Scouts Canada- Bill Palamar

Service Master - Ian England

Staffworks – Sandra Sears

Twincraft - Kate McEachern

VenGrowth Private Equity Partners - Graham McBride