

Introduction to
Measuring the
ROI of Talent
Assessment

Introduction

Many organisations would like to have a clearer understanding of the return gained through their investments in people, for instance accurately assessing external and internal talent to select and promote the best people. This is often seen as 'too difficult' and as a result sidelined. This is borne out by a Talent Q survey of senior HR professionals, indicating that 82% of organisations do not assess the return on their investments in talent. However, a significant minority of organisations are doing so. This guide has been designed to introduce organisations to the concepts and issues associated with assessing the ROI of talent assessment. Additionally, this guide is complemented by the Talent Q ROI Estimator, available at www.talentq.co.uk, which provides organisations with an estimate of the return on investment your current approach is likely to be delivering, and what could be achieved if these were optimised.

Organisations either fail to invest in effective assessment techniques to support external and internal hiring decisions, or the approaches they take are sub-optimal, leading to limited effectiveness and higher than necessary costs. The net result is a much lower return on investment than can be achieved, with reduced impact on organisational performance. Conversely, a wealth of empirical research over the last decade has demonstrated that organisations implementing progressive HR practices achieve higher retention, productivity and business performance.

Assessment, along with other HR-related activities such as training and development, is often seen as a cost without

consideration of its real contribution to business performance. Making the link between the two is often regarded as 'too difficult'. This guide outlines how defensible measurement of the ROI of assessment can be derived to support the business case for investing in best practice assessment techniques.

Measuring the return on investment of assessment is dependent on a number of key factors. On the one hand, it is necessary to calculate the **costs** of assessment – including both costs of assessment tools, and labour costs related to conducting assessment activities.

On the other side of the equation, it is also necessary to assess the differential impact of accurately selecting the best people (in both external and internal selection) on the performance of the organisation – the **return**. This operates through two key mechanisms, improved productivity through higher individual and collective performance, and reduced costs through better retention of good performers. The extent to which these potential returns can be realised is influenced by the relative effectiveness, or **validity**, of the assessment methods in place at accurately identifying the best candidates for particular roles.

Previous methodologies applied in this arena tended to view performance only at the individual level, whilst ignoring important organisational constraints, leading to highly inflated estimates of the likely returns. The Talent Q approach, however, draws on the latest organisational-level research to establish a realistic analysis of the returns from accurately selecting the right people.

Research Summary

Historically psychologists used an approach called 'utility analysis' to assess the cost/benefits of assessment. However, this suffers from a number of conceptual and practical flaws which are described below. The Talent Q approach draws on robust organisational-level research to provide more feasible estimates, taking into account the organisational constraints on the ROI of assessment.

Research to understand the relative impact of different assessment techniques has historically involved analysing how well the performance of individuals can be predicted. However, this approach known as 'utility analysis' has been criticised

because the estimates produced are unrealistically high and fail to take any account of organisational-level constraints.

Conversely, recent human resource management research linking HRM with financial performance at the organisational level contradicts these estimates and indicates the effect sizes are significantly smaller in practice. A more realistic starting point for estimating the ROI for objective assessment is hence to understand the relationship between the implementation of progressive HR practices (such as objective assessment) and the link to organisational performance. The diagram below illustrates how research in this area has developed over time.

1970/80s Approach

Traditional Utility Analysis:
over-inflated estimates when scaled up



1990/2000s Approach

Organisational-Level Research:
Links HRM Practice to business performance

Research Summary (continued)

Throughout the 1990's and 2000's a large number of organisational-level studies have been conducted across numerous sectors, analysing the relationship between the adoption of progressive HR practices (e.g. objective assessment in recruitment, investing in development, appraisal and performance management, team-based working, etc). For instance, a seminal study by Mark Huselid (1995) related the adoption of HR practices across 968 US companies with their financial performance (controlling for performance in previous years). This research revealed that on average, organisations possessing a more comprehensive HR system (based on scoring one standard deviation higher on the 'HRM' measure) demonstrated lower labour turnover (7%), higher productivity (\$27k sales/employee) and higher profitability (\$4.7k/employee).

As this body of research has grown (a sample of key references are provided at the end of this paper), it also has also been subject to a process called meta-analysis where many studies are combined. In 2006, Combs and colleagues aggregated 92 large scale studies conducted at the organisational level to produce a robust analysis across 1000's of organisations. This

research revealed that having a progressive HR system (e.g. objective selection, training, appraisals, employee surveys, etc.) related to an average 4% increase in financial performance (revenue) at the organisational level with 5-6 major practices deployed on average per organisation. Implementation of objective assessment within recruitment on its own showed a significant relationship explaining a 1.7% increase in company productivity (about one-third or less compared with the estimates of organisational benefit that traditional utility analysis suggests).

The online Talent Q ROI Estimator (www.talentq.co.uk) draws on this body of research, along with analysis of the costs of assessment and factors which can impact on predictive quality of different techniques. The results are very much an estimate but are intended to help highlight where improvements can be made.

It is also possible to conduct research within your own organisation to measure ROI more accurately. The following section outlines how this can be done. We are happy to work with organisations in more depth to help support accurate analysis of ROI from both their assessment and other HR activities.

Measuring ROI of assessment in your organisation

There are two key ways of measuring the ROI of talent assessment in an accurate way, there are essentially two main approaches:

1. Option 1:

The first involves combining accurate data where available and making assumptions based on the validity and productivity impact results for objective assessment derived from the wider HRM research.

2. Option 2:

The second approach involves more in-depth research to assess all these factors within the specific organisation.

Option 1: Combining company data with research-driven assumptions

To measure the ROI through this approach, there are two key steps:

1. Data gathering
2. Modelling the results.

A number of key inputs are required (see Appendix 1 for a summary of the high level inputs).

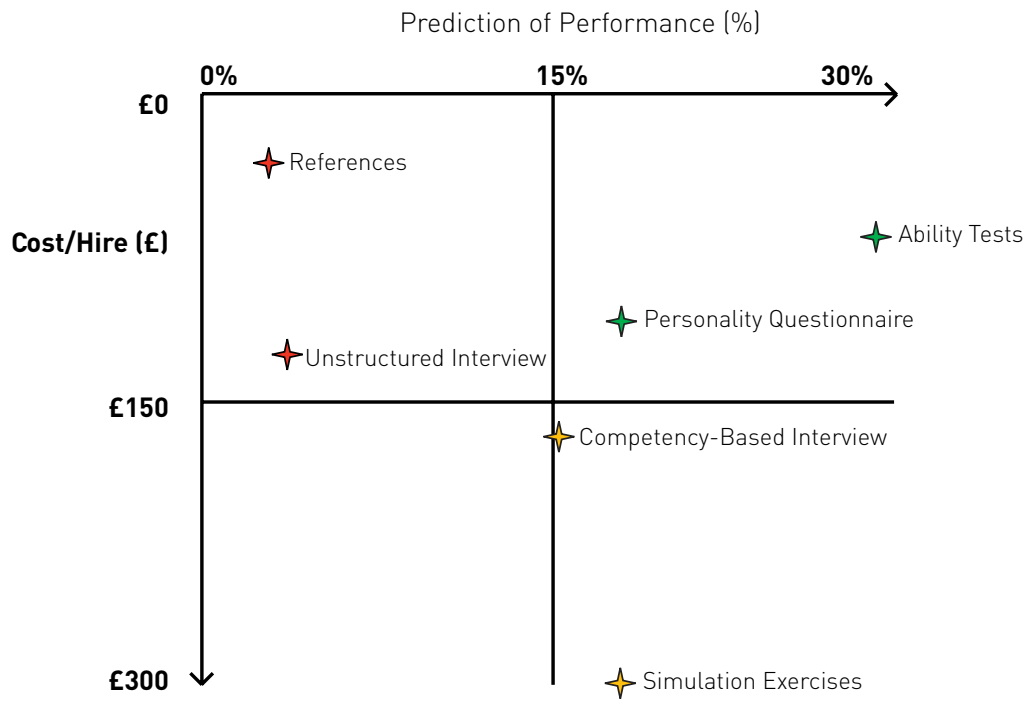
Employee numbers and segments - Clarification of the numbers in key employee segments (e.g. senior managers, functional specialists, frontline) and the rates of external and internal recruitment and attrition. Given different techniques may be in place for different groups, these can be effectively treated as separate datasets contributing to the whole. The number of external and internal hires is needed to extrapolate from ROI/hire to overall ROI for the organisation.

Costs - The costs of assessment, covering specific products or software and labour costs for both design and delivery of assessment processes should be accurately calculated. This should be done per hire, rather than per person assessed, and will typically require a review of the assessments in use, and the costs involved in their purchase, design and the labour involved in administering them.

Predictive validity - This is the effectiveness of the assessment methods used in accurately selecting higher performers. Ideally this should be based on validation evidence gathered within the company (see Approach 2 below), but it is entirely reasonable to extrapolate from the generic results of the considerable body of research already conducted and published in this area. In order to assess the benefit of objective assessment on reducing attrition (by helping ensure there is a good fit), this would again ideally be driven by in-company validation research but alternately the HRM research can be used to estimate this with a reasonable level of accuracy.

The chart below illustrates the relationship between the cost of assessment techniques and their relative effectiveness at predicting performance, based on a combination of meta-analytic research and a review of typical assessment costs per hire.

Assessment Techniques: Prediction vs. Cost



Based on Schmidt & Hunter (1998) meta-analytic review of validation studies and Talent Q (2008) analysis of average direct and indirect costs of assessment for UK organisations

Anticipated organisational benefits – There are two aspects in this regard, namely benefits for both productivity and retention. The financial impact of objective assessment on productivity can be estimated on the basis on meta-analysis conducted on the HRM research evidence (Combs, et al., 2006). This indicates that the productivity benefit of having objective assessment in place is typically 1.7% of overall turnover. For instance, in an organisation with a turnover of £100m, this would be £1.7m. This can be divided by the number of employees to indicate the anticipated benefit per hire, and segmented by employee groups as required.

The second element relates to reduced costs through reduced attrition. This requires analysis of the typical cost to the

organisation to recruit a new employee and train them to a point where they are able to perform effectively and add value. The anticipated benefit is calculated by taking this figure per hire, and the validity of objective assessment in reducing attrition.

The actual benefits to the organisation will be limited by the overall validity of the assessment techniques in place. This would be expected to deliver the anticipated benefits outlined above (e.g. 1.7% of turnover) if on average the combined objective assessment techniques in place have a validity in the 0.4-0.45 range. This would be adjusted up or down accordingly depending on how more or less robust the assessment approach is compared to this good practice benchmark.

Worked Example – Option 1:

Professional Services Organisation employing 1000 employees

Key Inputs	
Company Turnover	£130 million
Average Salary	£45k
Number of external hires <12 months	100
Assessment Process	<ul style="list-style-type: none">• Competency-based interviews• Off-the-shelf personality questionnaire and ability tests (for graduate recruits and selected key roles)• Business Simulation exercises
Validity of assessment process	0.53 (drawn from best practice HRM)
Cost per hire of assessments (including labour)	£308
Outputs	
Organisational impact of high performance compared with an average performer	£2049 per hire
Net return per hire	£1742
Return on Investment: (Net return per hire / cost per hire)	$£1742 / £308 = £6.70$ for every £1 invested in objective assessment

Summary

Given the company turnover and average salary, the approach to assessment is delivering fairly typical levels of return given the average salary range being assessed. Focusing techniques and honing their design and implementation are likely to present key opportunities to improve performance of the processes in place.

Even greater benefit can be achieved through a combination of a more tailored approach mapped to competencies to ensure higher predictive effectiveness, direct and indirect cost savings through optimising the cost of techniques used.

Option 2: In-depth analysis of the impact of assessment on company performance

The approach outlined in Option 1 to data gathering provides a pragmatic balance between accurate costings where this can be achieved relatively easily through desk research, and research-driven assumptions based on the figures gathered. The next step, however, is to develop in-company measurement in more depth.

Assess validity of assessments – This typically involves developing a dataset of assessment results and subsequent performance data for a sample of individuals in similar roles (e.g. 100 or more). Relationships can then be statistically analysed using correlation and regression to assess the predictive validity of the approaches used.

Assess the impact on organisational performance – In organisations with relatively discrete roles or units, it is possible to compare the assessment results for lead roles with financial performance. For instance, in a sales function it may be feasible to validate the assessment methods against actual sales performance – the hard numbers. Similarly, in operational functions where there may be separate branches or teams (e.g. in a retail setting), research can be conducted to look at the assessment results for leaders and teams in each unit and statistically analyse relationships between these and the financial performance of each unit.

Application of the additional primary research techniques above requires a commitment to invest in the necessary data gathering but can then support a full and robust assessment of ROI.

Example validity study:

Talent Q worked with a large restaurant group to help them understand how Dimensions could help them to select restaurant managers. Using managers who were already employed, each one was rated on four key competencies by their own manager and these ratings were compared with their results on Talent Q Dimensions personality questionnaire. Talent Q then looked at the relationship between the manager ratings and the Dimensions scores to look for which scales were most predictive of successful performance on the job. In doing so, we were able to highlight the scales which were most predictive of performance and a correlation of 0.52 was observed, thus suggesting that adding Dimensions into their selection process and would inevitably help to them recruit a better calibre of manager.

Modelling the results

So, once the key inputs have been gathered, how are they combined to assess ROI? The details of modelling results will vary from organisation to organisation. However, the principal elements which need to be calculated are as follows:

Benefit/Hire – The total estimated financial benefit through improved performance and retention, per employee. This is calculated by taking the improvement opportunity available (e.g. 1.7% of performance), multiplied by the proportion of variance that the assessment can predicted versus what is expected as good practice.

Cost/Hire – The overall estimated cost of assessment (including labour costs for design and delivery) per person hired through external or internal recruitment. It is important to note these are the assessment costs specifically, not the overall recruitment costs of sourcing candidates.

Net Return/Hire – This relates to the benefit minus cost, and is the actual return per hire through applying the specific objective assessment techniques in place.

ROI/Hire – This relates to ratio between the benefits achieved and the costs of assessment. The higher the number, the greater the return on investment. For instance, a result of 5.4 shows that the financial benefit of using objective assessment to select the best people was 5.4 times higher than the overall costs of doing so.

The organisational level figures can then be calculated on the basis of the number of external and internal hires made within the company. The approach outlined above is intended to give ROI figures over the first year. However, further analysis of the tenure of employees across the organisation can also be conducted to assess ROI over longer time periods.

Worked Example

Worked Example – Option 2:

Retail organisation with 400 stores across the UK

Analysis focuses on contribution of store managers, looking at the assessment results for 70 managers hired over the last 18 months and linking these to store performance.

Key Inputs	
Annual turnover per store	£10 million
Average profit per store	£1 million
Average salary of store manager	£40k
Assessment Process	Assessment Centres comprising full range of assessment techniques. Process produces overall ratings for managers against 8 competencies.
Cost per hire of assessments (including labour)	£750

Statistical analysis of the relationship between store manager competency ratings and relative financial performance of stores (controlling for average store performance in 2 years prior) indicates the following:

A high performing store manager (averaging 4 out of 5 on competency ratings), compared to an average performing store manager (averaging 3 out of 5 on competency ratings, delivered the following higher levels of performance:

- Impact on turnover/store = £80,000
- Impact on profit/store = £20,250

As might be expected, a great many other factors influence store performance (e.g. location, market conditions). However, the capabilities of the manager have a statistically demonstrable

effect explaining 2% of store profitability.

If we take profit as our clearest measure of business benefit at the store level, this means

- Net return per hire = £19,500
- ROI = Impact on profit/store per hire (£15,000) divided by cost per hire (£750)
= £26 for every £1 invested in objective assessment

Summary

Due to the significant opportunity for store managers to impact business performance, and the application of a thorough and valid assessment process, the assessment process is delivering a strong return on investment.

Tips for maximising the ROI of Talent Assessment

Some simple steps you can take to maximise the ROI of talent assessment are:

- **Choice of test** – spring clean your test cupboard! Are you using the best tests available? When was the last time you reviewed your test choices?
- **What happens to your recruitment data?** Once you've hired employees what do you do with the information? Can it be easily re-used? Innovations on online assessment can make it possible to apply data gather to different applications – development, high potential identification, team building.
- **Are the tests linked to the competencies/skills required for the job?** Have the requirements for the job changed since the tests were chosen?
- **Is your test administration online or offline?** – online administration offers greater efficiencies over offline in terms of cost and time. Online also enhances your assessment process in the eyes of the candidate who are likely to have expectations of hi-tech methods.
- **Do the test you use work?** - Conduct validity studies or review the evidence available.
- **Measure the impact** – Use the Talent Q ROI Estimator (www.talentq.co.uk) as a quick guide or conduct ROI analysis in your organisation so you can make the case for your investments in assessment.

Example validity study:

A project with a major telecoms company based in Asia-Pacific, Talent Q was able to demonstrate that by using Talent Q Elements ability test and the appropriate Dimensions personality questionnaire scales, sales representatives' performance could be predicted extremely well (overall correlation was 0.51). Therefore, by incorporating these tests into the overall assessment process the client could recruit people that were most suited for the role.

Next Steps

As is clear from the methodology outlined above, there are defined data gathering and modelling activities required to conduct your own company-specific ROI assessment.

For a simple estimation of ROI, the Talent Q ROI Estimator (see www.talentq.co.uk) enables you to gain a snapshot of the likely benefits and costs of your assessment methodology, drawing on the Human Resource Management research described in this document.

However, for those interested in assessing the ROI of assessment techniques using accurate costings and analysis within their own organisations, Talent Q can support this on an advisory and consulting basis. Please feel free to contact us +44 (0)1844 218980 if you have further queries or would like to explore support in this regard.

Appendix 1: Data Gathering

Key data you are likely to need as inputs to measuring the ROI of assessment include:

Organisation-level Data

- What is the financial turnover of the organisation per year (£millions)?
- How many people are employed by the organisation?
- What is the average salary?
- What is the % staff attrition rate per year?
- How many roles were filled through external recruitment (approx.) over the last year?
- How many roles were filled through internal recruitment (approx.) over the last year?

Assessment Techniques

- To what extent are the following techniques used for external and internal hires?
 - o Biographical / experience-based interviews
 - o References
 - o Competency-based interviews
 - o Case study/simulation exercises
 - o Personality assessment
 - o Ability tests (e.g. Verbal / Numerical reasoning assessment)
- Do you have data on the predictive validity of each of the techniques you use?
- What do these cost to buy/design/deliver (including labour costs, e.g. for conducting interview)?

How assessments are designed and applied

The following additional elements below are likely to relate to the validity, cost and impact on employee retention of your assessment processes.

- Do you have competency models as the basis for assessment relating to the roles you regularly recruit into?
- If so, have these been developed through analysis of the critical success factors underpinning successful performance?
- Have you identified the personality profile of people who stay longer with the organisation and built this into your assessment process?
- Do you make use of assessment data that has been generated through previous assessment activities to support internal hiring decisions?

If you use...

- ...case study/simulation exercises, are these specifically developed for the roles where they are being applied (as opposed to 'off the shelf')?
 - ...personality assessment, does the questionnaire you use relate specifically to behaviour at work (as opposed to behaviour in general)?
 - ...personality assessment, does the questionnaire use an element of 'forced choice' responses to reduce candidates exaggerating their responses?
 - ...personality assessment, do the results generate specific interview questions to explore likely strengths and risk areas?
 - ...personality assessment, are the results mapped onto your own competencies to allow easy interpretation?
 - ...personality assessment, is this conducted online (as opposed to paper-based administration)?
 - ...ability assessment, is this conducted online (as opposed to paper-based administration)?
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Key Research Articles

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Talent Q provides innovative online psychometric assessments, training and assessment consulting, addressing talent management challenges throughout the employee cycle.

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