Scientific Method to Hire
Great Scrum Masters

Pavel Dabrytski
Growing my company

I started Think Agile back in 2015 out of Johannesburg, South Africa.

The work and revenue has been growing exponentially each year.

At one point, I ran out of time in a day.
Evaluation of cadets for flying training during WWII by a qualified board (flight surgeon and aviation psychologist).

1524 cadets were interviewed
285 were sent to pilot training
68.9% of them failed training
73% fail training if sent automatically without evaluation.

Clinically evaluated cadets are no more likely to succeed.

Israeli Army: highly intelligent and educated interviewers made a judgment on how well the recruits would do in the army after a few interviews and observations.

The follow-up evaluations showed that the designed procedure was useless in identifying the future success of the recruits because the interviewers made the decisions based mostly on their intuition.

The plan for today

1. Explain why current interviewing methods do not work well
   ![Broken Chain]

2. Learn a new statistical method to hire winning candidates
   ![Chef]

3. Practice creating an evaluation scale for your company
   ![Bar Graph]
Expert (clinical) predictions

- psychiatrist evaluating the likelihood of attempted suicide in her patient
- product manager prophesizing the success of the product on the market
Statistical predictions

• using psychometric data to determine the likelihood of suicide

• using early sales numbers and focus group response to determine the success of product
Clinical vs statistical predictions

• interviewer predicting the candidate’s future performance

• the presence or absence of individual traits and characteristics determines the worker’s future performance
It is “hard to show rigorously why the clinicians ought to do better than the actuaries.”

While a clinician is often sure that he could predict the right outcome, the fact is that he cannot.

To date, scholars have identified 154 cognitive deviations from rationality that are relatively consistent across the human population.

Stereotypes help people simplify complex information.

The problem is that the stereotypes are mainly untrue, they are negative, and they substitute factual information with a faulty judgment, forcing the company to limit the pool of capable candidates.

An individual has been described by a neighbor as follows: “Steve is very shy and withdrawn, invariably helpful but with little interest in people or in the world of reality. A meek and tidy soul, he has a need for order and structure, and a passion for detail.” Is Steve more likely to be a librarian or a farmer?

Stereotype threat

Vast empirical evidence shows that when a person is subjected to stereotypes, she can experience a self-inflicted subdued performance, hampering her achievements.

If at any moment during the interview, a person feels that they are subject to stereotyping by the interviewer (through leading questions or extensive focus on the candidate's background and upbringing), she might unintentionally lower her performance.

People tend to favor members of their own groups because their group membership is often tied to feelings of high self-esteem.

Participants are randomly assigned to RED and BLUE groups with no further information to enhance identification of participants, reducing the influence of other stereotypes and prejudice.

Following the split, the participants are asked for their willingness to play a series of eight games with other subjects. The games were designed to elicit participants’ degree of altruism, positive reciprocity, and negative reciprocity.

About 45% of the participants indicated a strictly positive preference for an in-group match, and 70% stated a weak preference for an in-group match.

The statistical method

• Define a few main traits that you are looking for in a new candidate
• Limit the traits to a small number of six or so
• Develop an evaluation scale from 1 to 5, deciding on what it means to be “very weak” or “very strong” for each of the criteria
• During the interview process, evaluate candidates on each of the traits using the developed scale
• Hire the individual with the highest score (and above a set threshold)

Think of potential traits you should be looking for in a good Scrum Master.

- discuss in the team
- limit them to four or six
- write them on an index card and pass to the speaker
Our Agile Coach assessment

<table>
<thead>
<tr>
<th>Area of assessment</th>
<th>Score</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of education and certification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agile community involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td>≤5</td>
<td>decline</td>
</tr>
<tr>
<td>Technical knowledge of Agile frameworks and methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitation and presentation skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coaching skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td>≤14</td>
<td>decline</td>
</tr>
<tr>
<td></td>
<td>15-17</td>
<td>conditional accept</td>
</tr>
<tr>
<td></td>
<td>≥18</td>
<td>accept</td>
</tr>
</tbody>
</table>

**Decision:**

For screening (out of 12):

0-5 – decline  
6-12 – invite for interview

For interviewing (out of 24):

0-14 – decline  
15-17 – conditional accept  
18-24 – accept

Legend:

0 – absent  
1 – poor  
2 – average  
3 – good  
4 – outstanding
Our Agile Coach assessment
## Example: facilitation assessment scores

<table>
<thead>
<tr>
<th>Score</th>
<th>Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – absent</td>
<td>The candidate could not explain the topic</td>
</tr>
<tr>
<td>1 – poor</td>
<td>The candidate has a basic understanding, made theoretical mistakes</td>
</tr>
<tr>
<td>2 – average</td>
<td>The candidate used models, told a story, drew a picture, but didn’t manage time well</td>
</tr>
<tr>
<td>3 – good</td>
<td>The candidate engaged with the audience, met the time limit, and used a few of the following (visuals, stories, analogies, models)</td>
</tr>
<tr>
<td>4 – outstanding</td>
<td>The candidate created context, engaged with the audience, met the time limit, and used all of the following (visuals, stories, analogies, models)</td>
</tr>
</tbody>
</table>
Design an evaluation scale for one of the traits you have identified in the previous exercise.

• define scores for this one trait:
  0, or absent
  1, or poor
  2, or average
  3, or good
  4, or outstanding

• share you results with the speaker on a card
Results of our recruitment process

- A total of 68 candidates applied for the position
- 6 of them stopped the process themselves and 26 did not attend their screening
- 27 applicants were rejected during the screening process
- 9 were rejected during the interview process
- 2 candidates with the scores of 20 and 21 were hired into the company
Broken leg

It is Saturday night and raining.

What is the chance he is going to movies tonight?
Multivariable regression function

\[ y = \alpha + \beta_1 x_1 + \cdots + \beta_n x_n + \varepsilon \]

\[ \hat{y} = x_1 + \cdots + x_6, \quad \text{where } x_{1...6} \text{ are traits and } a = 0, b_{1...6} = 1 \]

The traits perform the role of independent variables in the multi-variable regression function.
It is crucial to choose the variables that can reliably predict the candidate's future performance.
Avoid **multicollinearity** – traits should be independent from each other.
Diversity

Identify diversity – race, gender, ethnicity, and age
Cognitive diversity – perspective, culture, socioeconomic circumstances, and education

It helps create **cross-experiential teams**

But diverse organizations are more likely to experience personal conflict and problems in communication.

Think Agile Neighborhood

- Free to participate, and the participant can opt-out at any time
- We offer them all our courses for free
- We organize regular community events: coaching circles, master classes, one-on-one coaching
- We sponsor further external learning to the amount of $1000 per delegate.
We are still growing

This is the projected growth based on the first five months of 2019.
Scientific Method to Hire Great Scrum Masters

website: https://thinkagile.co.za
email: pavel@thinkagile.co.za
phone: +27 73 616 3392
slides: www.slideshare.net/paveldabrytski