January 2019

Development Rationale

MindmetriQ Gamified Assessments

MindmetriQ

Gamified assessments and 'g'

Gamified assessments have a lot of potential, **if** they're done scientifically. Which is what we've done.
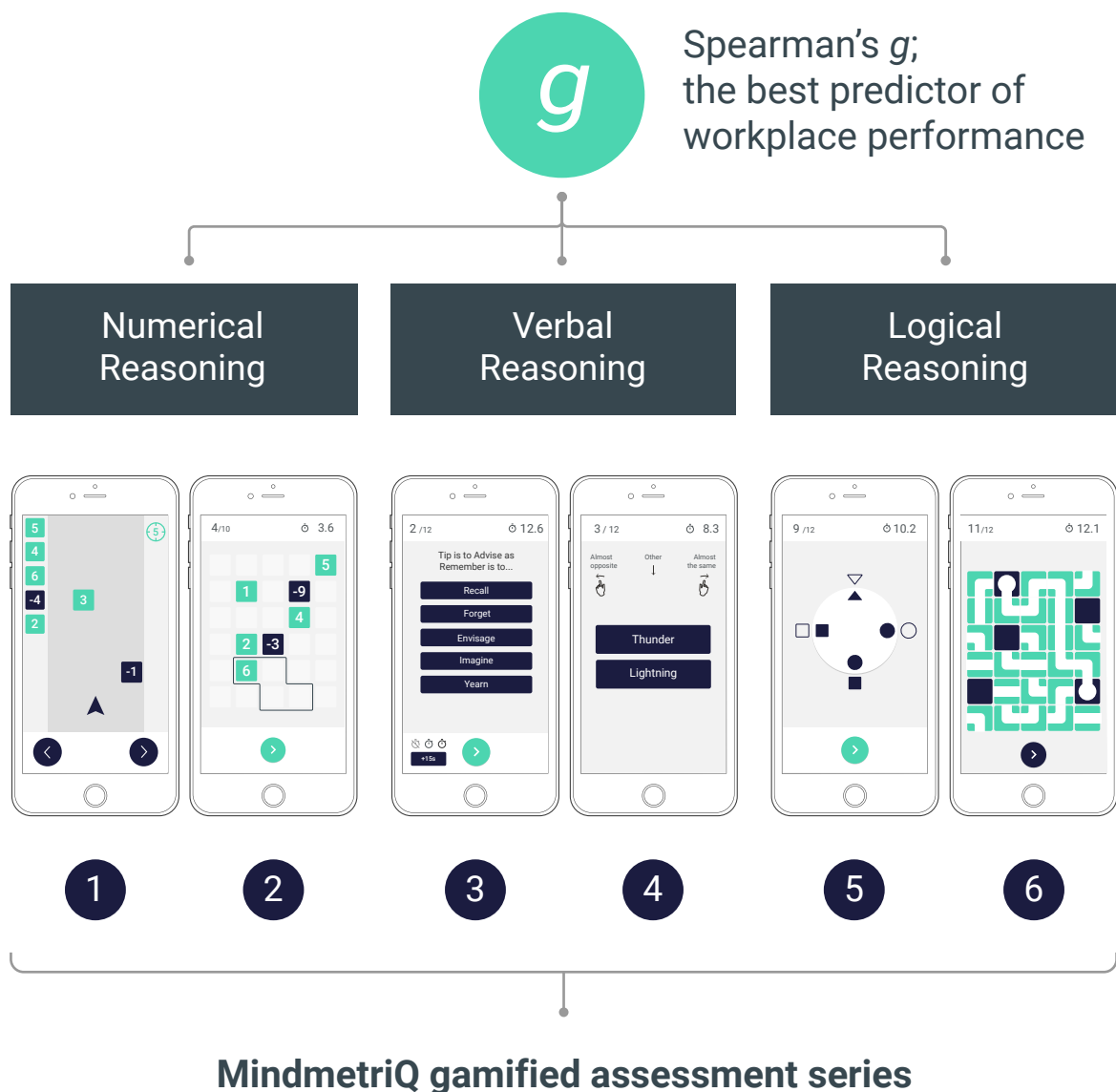
We've used advanced psychometric methods and calibration data from tens of thousands of test completions to bring proven science to gamified assessments.

Extensive research finds that general cognitive ability (sometimes referred to as '*g*') is the best predictor of job performance (Schmidt & Hunter, 1998). So guess what we developed our gamified assessments to measure...yes they all measure *g*!
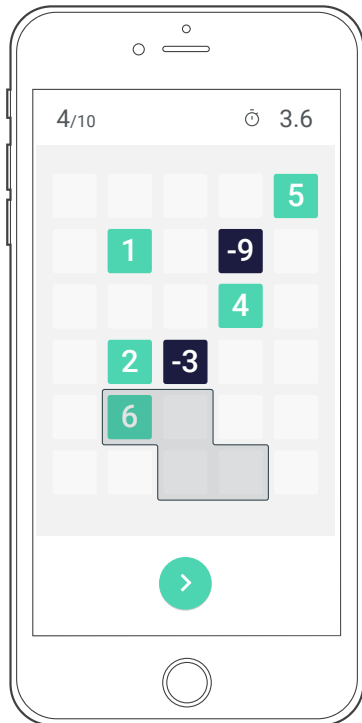

Schmidt, F. L., & Hunter, J. E. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin, 124(2)*, 262

Test Partnership

Each one of our six assessments on its own has comparable validity and reliability to a traditional ability test (e.g. numerical or verbal reasoning test). So combine the six gamified assessments and the predictive power is significant.

_g_

Spearman's _g_; the best predictor of workplace performance

Numerical Reasoning	Verbal Reasoning	Logical Reasoning

① ② ③ ④ ⑤ ⑥

MindmetriQ gamified assessment series

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Numerical reasoning factor

4/10   ⏱ 3.6

			5
	1	-9	
		4	
	2	-3	
	6		

① Net the Numbers

Measures: Numerical reasoning.

Task: Candidates must drag the highlighted net over the numbers which when summed give the largest possible answer. Remember the highest number may be negative.
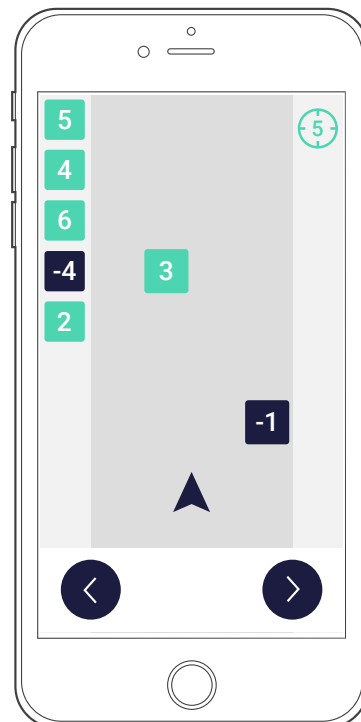
g facets: quantitative reasoning, working memory capacity, visual processing.
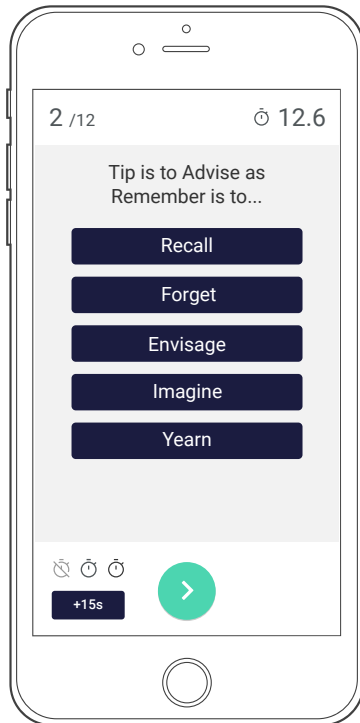
② Number Racer

Measures: Numerical reasoning.

Task: Candidates must check which numbers are falling and collect those which sum to the target number. Be careful to avoid the other falling numbers.

g facets: quantitative reasoning, perceptual speed, memory span.

Test Partnership

Verbal reasoning factor

3 Word Logic

Measures: Verbal reasoning.

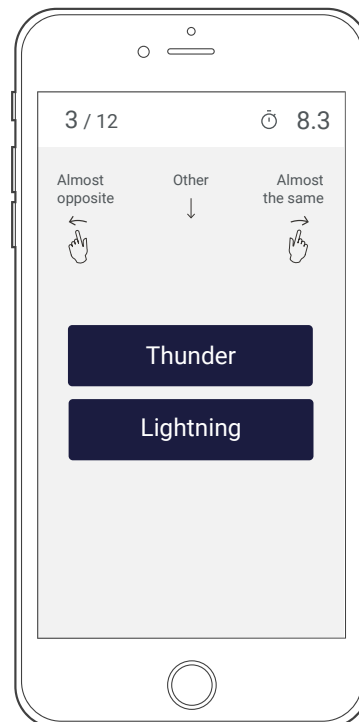**Task:** Candidates are asked to complete verbal analogies by tapping the best option.

g facets: reading decoding, processing verbal information, cloze reasoning (missing information).
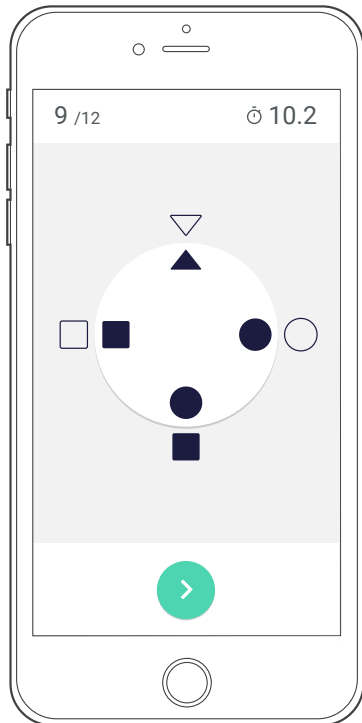
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4 Link Swipe

Measures: Verbal reasoning.

Task: Candidates are presented with a pair of words and asked to decide whether they are synonyms, antonyms, or neither.

g facets: lexical knowledge, processing verbal information, grammatical sensitivity.

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Logical reasoning factor

9 /12 ⏱ 10.2

⑤ Shape Spinner

Measures: Logical reasoning.

Task: Candidates spin the wheel so that each symbol is next to one of the same shape **or** the same shading, but not both. Make sure you check every symbol.
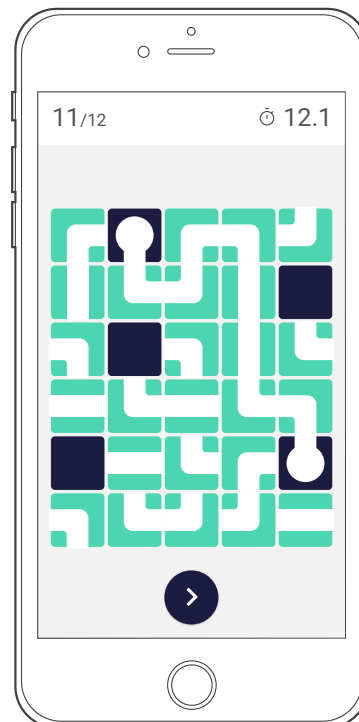
g facets: speeded rotation, visualization, serial perceptual integration.
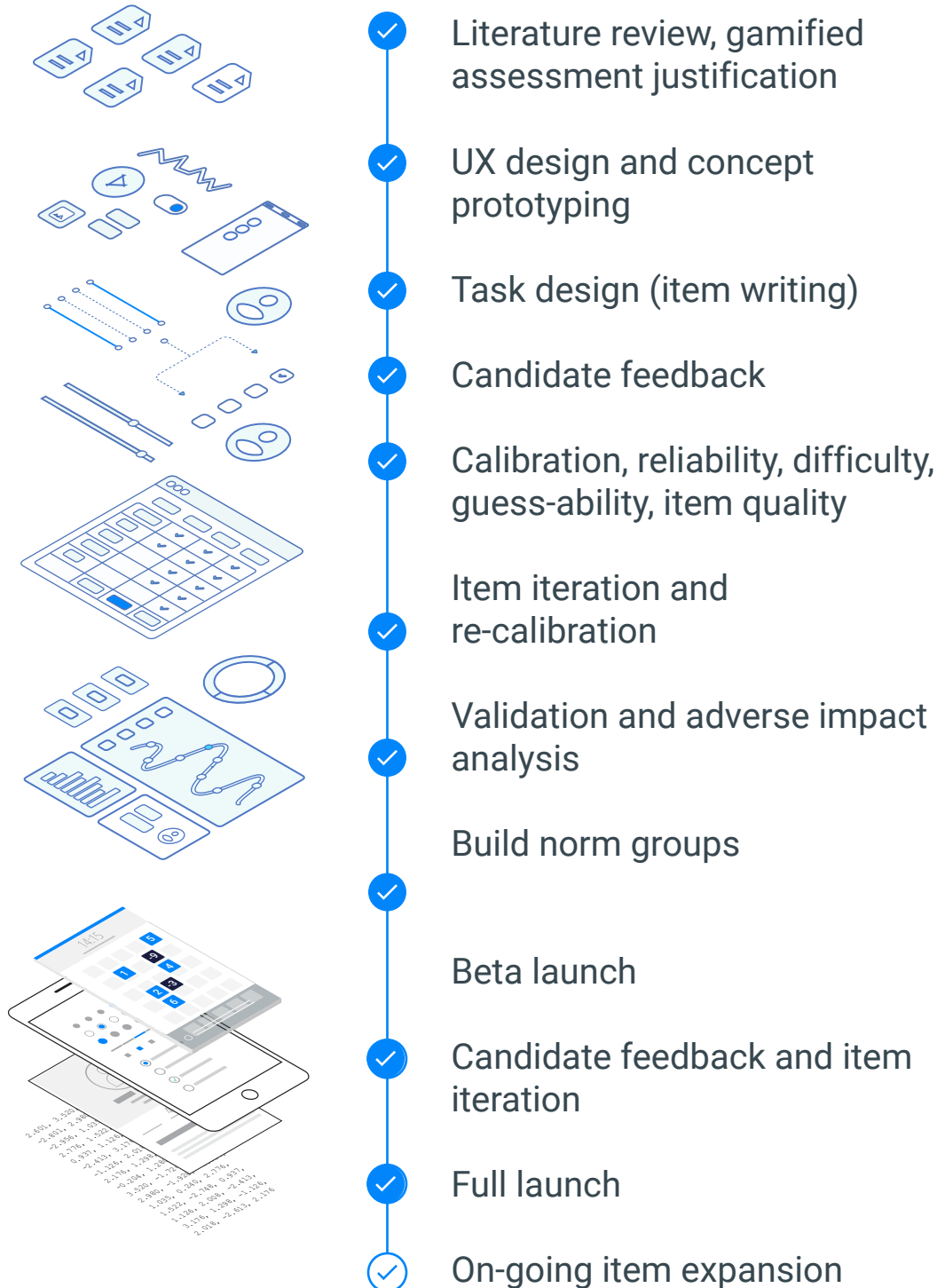
⑥ Pipe Puzzle

Measures: Logical reasoning.

Task: Candidates must re-arrange the pipes to connect the two end points. Avoid the solid obstacles and make sure you have enough pipes.

g facets: spatial scanning, visual memory, flexibility of closure.

11/12 ⏱ 12.1

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Development process

Literature review, gamified assessment justification

UX design and concept prototyping

Task design (item writing)

Candidate feedback

Calibration, reliability, difficulty, guess-ability, item quality

Item iteration and re-calibration

Validation and adverse impact analysis

Build norm groups

Beta launch

Candidate feedback and item iteration

Full launch

On-going item expansion

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Want to know more?

Please get in touch to find out more.

With advanced technology and robust science, candidate selection is changing for the better. And we're inviting you to be part of this progress.

✉ info@testpartnership.com
📞 + 44 20 7960 2897

Test Partnership tests are used globally by organisations including:

J.P.Morgan   BAKER TILLY   Allianz ⑪   GLENCORE

Deloitte.   ANZ   BNP PARIBAS   skyscanner

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