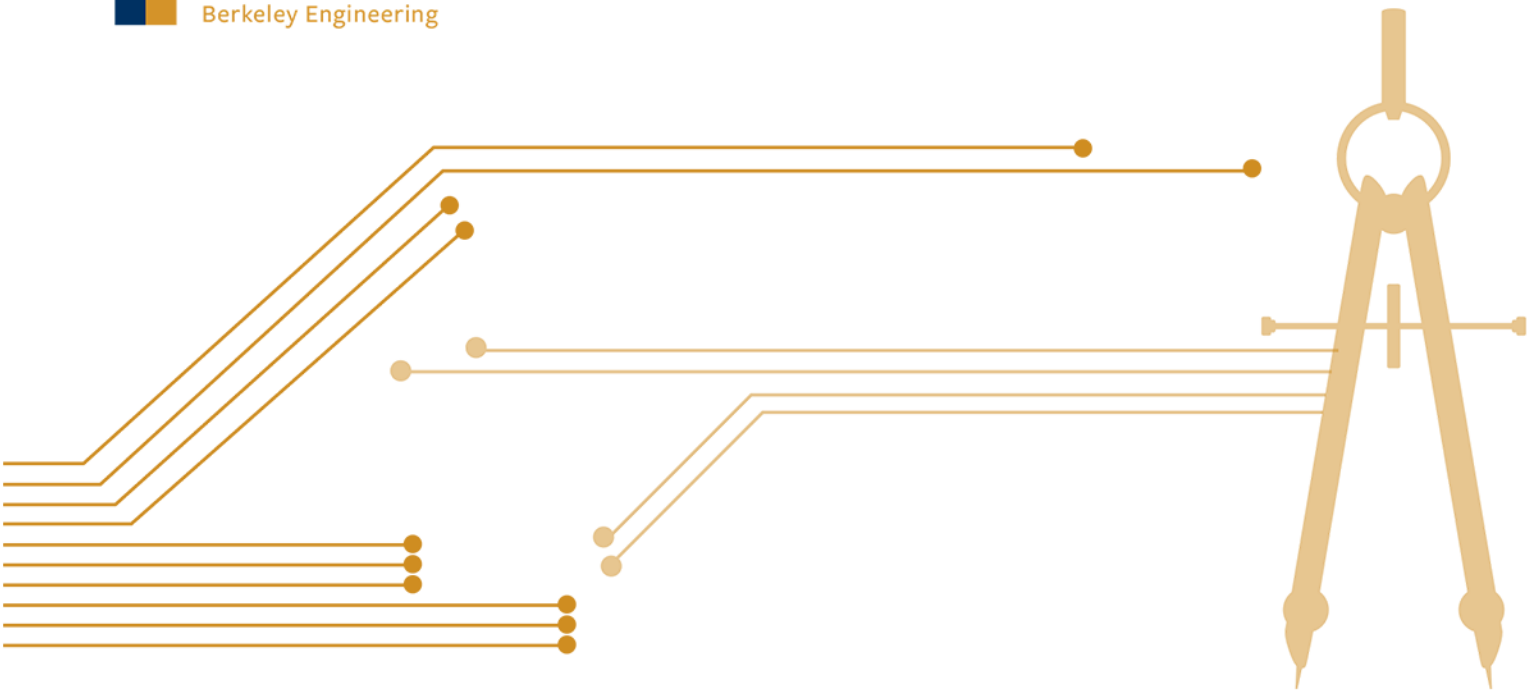
Pantas and Ting
Sutardja Center
for Entrepreneurship & Technology
Berkeley Engineering



Cognigence – Cognitive Training for Corporations

Janos Botyanszki, Nima Baniasadi, Ariana Ling, Sahar Yousef
IEOR 290 Spring 2016

This work was created in an open classroom environment as part of a program within the Sutardja Center for Entrepreneurship & Technology and led by Prof. Ikhlaq Sidhu at UC Berkeley. There should be no proprietary information contained in this paper. No information contained in this paper is intended to affect or influence public relations with any firm affiliated with any of the authors. The views represented are those of the authors alone and do not reflect those of the University of California Berkeley.

Berkeley
UNIVERSITY OF CALIFORNIA

Introduction

We help companies maximize the performance of their talent by training them to combat information overload with cutting-edge techniques and tools from UC Berkeley scientists.

By collecting data on employees with research-grade cognitive assessments, we also give management a view of their employees' cognitive landscape.

An Alternate Future

Imagine if you could concentrate for hours without getting distracted by your thoughts, emotions, and social media platforms. Imagine if you could heighten your memory whenever you need. Imagine if you could regulate your stress level at any time.

We at Cognigence are all about making brains better, faster, stronger. Our team of researchers at Berkeley has already perfected the core techniques for cognitive improvement. We have tested them on over 200 people and have seen incredible results; and now, we are ready to bring them to market.

A decade ago, most people thought brain traits like attention and memory were hard-wired into the brain and unchangeable. Recent research shows us the exact opposite!

Lack of productivity and employee well-being leads to financial losses for corporations. In addition, companies have no tools to diagnose cognitive deficiencies.

To address these concerns, we have developed a cognitive training course based on decades of research that has been shown to improve attention and memory. Our offering includes a three-prong approach:

1. Assessments: Research-grade assessments provide a data-driven diagnostic into the cognitive landscape of a company
2. Training: Targeted training workshops are personalized to fit the company's needs and to optimize for their time
3. Long-term change: Follow-up consulting and coaching on implementing strategies and systems ensure long-lasting changes

We plan to develop supplemental enterprise software to the training program that allows individuals to practice the cognitive techniques they are learning in a virtual environment to support their training outcomes. The software also supports long term habit formation via personalized notifications and reminders as well as collecting data on the individual's cognitive state to continue to provide the company and the individual meaningful analytics and insights.

Value Proposition

If every employee of a large company (~500 employees, average salary $40/hr) loses just 1 hour of productivity each 8-hour work day, then the company loses **$5M per year in labor costs**.

According to research at UC Berkeley, training high-performing participants led to increases in attention, self-regulation, and memory by an average of 47% in 7 weeks. Even with a modest estimate of a 10% improvement in cognitive performance, our training would still **save that same company at least $500K per year**.

We propose year-long packages for companies starting at $100K, a fraction of the cost of not dealing with the issue.

Customers' Interest

According to a 2011 PricewaterhouseCooper survey, 'training and development' was the highest rated benefit for Millennials entering the workplace. According to the U.S. Census Bureau (2015), 'non-routine cognitive jobs' comprise more than 55 million jobs in the U.S., accounting for 40% of the workforce.

U.S. organizations spent $164.2 billion on employee learning and development in 2012, according to the Association for Talent Development's (ATD's) 2013 *State of the Industry* report. Talent training and development is also a growing expenditure for companies. The Bersin by Deloitte 2014 *Corporate Learning Factbook* showed that training and development has shown the highest growth rate in 7 years, up 15% since the year before.

Based on one-on-one conversations in the past 3 months with 30+ potential customers, potential partners, and mentors, we've gained deep insight into the corporate training ecosystem. We are happy to announce that Bay-Area-based tech company Quora will be our first pilot customer. We are charging at a minimum, enough to cover cost, as we are working with them to develop the best product. We are in conversation with LinkedIn and Symantec to potentially pilot a program with them as well.

Here are some testimonials from the research conducted at U.C. Berkeley:
95% of high-performing participants would recommend the training to a colleague or friend.

"After this training course, I find myself less stressed and yet working harder and getting more done than I was before. This was definitely a game-changer. Thank you!"
-Founder and President, Tech Organization

"This has really helped me change the amount I can get done in a day as well as helped me achieve longer term goals."
-PhD Data Science Consultant

"The strategies we learned on how to focus, remember, retain, and regulate ourselves better were extremely beneficial!"

-Research Associate & Student, UC Berkeley

Market Size

We estimate the market size for each of our products, as they are not necessarily the same population.

55,000,000 knowledge-workers * ($50 / annual cognitive assessment subscription) = **$2.75B market for Cognitive Assessments**
16,000 large companies * (7 lectures / year) * ($3000 / lecture) = **$300M market for Lectures**
16,000 large companies * (50 executives and VPs / company) * (25 sessions / year) * ($200 / session) = **$4B market for Top-level Coaching**
16,000 large companies * ~100K annual package = **1.6B market for annual contracts**

Based on the nature of our product (training and coaching), we can realistically target up to 40 companies per year (which is a mere 0.25% of the market). Since the cognitive assessments are fully automated and scalable, the bottleneck is customer acquisition. Realistically, with a modest marketing and sales team, we estimate onboarding the employees of 60 companies annually, or about 30,000 subscriptions (0.05% of the market).

Business Model

We anticipate 3 revenue streams:

1. Service-based Tiered Pricing for training workshops, bootcamps, coaching, & assessments
2. Annual Package Subscription which includes assessments, training, and consulting/coaching
3. Subscription-based enterprise software

Competitors

While there are a number of companies providing training programs in the cognitive training space (The Energy Project, Forte Labs), we will be the only training program published in a peer-reviewed journal. Furthermore, while there are a few companies creating cognitive assessments (Savonix, Akili Labs), our target market has no direct competitor. The largest player in this space, Lumosity, is a game-based training that has been shown to be ineffective.

Timeline

2016 Q3 (Spring)	2016 Q4 (Summer)	2017 Q1 (Fall)	2017 Q2 (Winter)	2017 Q3 (Spring)
Product R&D				
Product Development (Assessments)	Product Development (Assessments)	Product Development (Assessments)		
Piloting	Piloting	Sales	Sales	Sales
		Marketing	Marketing	Marketing

Next Steps

Using an initial investment from the founders, we will be prototyping a system for online cognitive assessments. We plan on piloting this system with a number of customers during the upcoming months (Q3-Q4 of 2016), and using the revenue from these pilots to continue building out the technology for cognitive assessments. We are looking for engineers to build the system, and initial seed funding would help this process. Most importantly, mentorship about the business model would also be invaluable, as we do not currently have anyone on the team with a business background.

The Team

Janos Botyanszki -- PhD, Physics. Experience with computational modeling, software engineering, and managing teams of 5-10
Nima Baniasadi -- PhD, Electrical Engineering
Ariana Ling -- B.A. Molecular Cell Biology, B.A. Economics, experience in Venture Capital, Operations, and Marketing
Sahar Yousef -- PhD, Vision Science, 7 years experience in Cognitive Neuroscience Research, Developer of Cognitive Training Programs, experience in Growth and Product Management.

Conclusion

During the course of this class, we learned a number of important concepts relating to our venture. One of these was the question that our instructors posed during our business development pitches: what is it that you know, and it took you a non-significant amount of time and effort to learn, that no one else knows? Even though the training program we have is based on years of research, productizing it has taken a number of pivots. We learned about the importance of narrowing the target market, which originally included everything from athletes to executives. After our first set of market research conversations, we realized the potential customers and partners expected a “product brochure.” We created an MVP brochure that outlines our offerings and can be sent out

to potential customers. We have spent some time discussing business models and funding strategies as a team. However, at our last presentation, our professors challenged our narrow thinking in a wonderfully enlightening way. Since that final presentation, we are planning on thinking much bigger than we had previously planned and will continue researching and discussing more creative business models in the coming months. In the meantime, we have a basic business model with revenue streams that we believe will allow us to bootstrap the venture and give us time to build the tech side of our project.