OPTICAL INNOVATION SUMMIT recap

JUNE 5–6, 2019 | BOULDER, COLORADO
The Vision Council hosted the second event in their Summit Series, the Optical Innovation Summit – held June 5-6, 2019 in beautiful Boulder, Colorado – in collaboration with Bart Foster, strategic advisor to The Vision Council.

During the summit, industry leaders mixed with emerging startups to discuss the future of the eyecare industry. Participants were immersed in hands-on learning, ideation and networking, and had the opportunity to get outside to hike the foothills of the Rocky Mountains and tour Boulder’s famous Pearl Street, while building authentic and lasting relationships.

With the goal of advancing technologies and business models so that everyone wins, this event was also an opportunity to learn about the major consumer trends affecting the optical industry and allow participants the chance to mix with their peers from other companies.

“The Optical Innovation Summit was a perfect mix of ideation, adventure and insights. And Boulder was an ideal venue!”

–Jim McGrann, CEO of Healthy Eyes Advantage
THE FUTURE BACKWARDS

The format of this two-day event provided an opportunity for industry leaders to discuss and debate the customer journey and share ideas on how it could be improved through collaboration. Foster led an exercise called, “The Future Backwards,” where participants identified the current state of the customer journey, then worked backwards to identify key events and milestones. The group then discussed utopia, or the “impossibly great” customer experience, and what it would take to create that, tracing back to the events of the past.

Below are key insights from the group.
"I truly enjoyed engaging with my peers in a casual environment discussing business opportunities and issues for our industry... count me in to attend next year’s Summit!"

–Derek Dodge, President & CEO of HOYA US/LATAM
EMERGING STARTUPS

On day two, emerging startup companies were given the opportunity to engage with industry leaders to hear their thoughts and advice. “Our goal was to bring together C-level leaders who could help startups with their biggest challenges by providing perspective, shared experiences, advice and mentorship,” said Foster. Startup companies selected to participate included: DITTO, Eyes4Lives, NovaSight, PAIR, Hue.AI, King Children and Cognivue.
CORPORATE INNOVATION

Guest speaker Jason Yotopoulos, founder of Mach49, discussed the role of corporate innovation and the opportunity to use a unique entrepreneurial process leveraged by the best startups, but tailored to the unique challenges of innovating within large companies (e.g. the antibodies). We learned there are four ways for corporations to innovate:

1. **Buy** through acquisition or merger
2. **Invest** in an emerging company
3. **Build** internally
4. **Partner** through a commercial deal

“In order to build innovation, management first needs to suspend disbelief, then you need to go prove it. From there you need to ideate, innovate and accelerate through a rapid 12-week process,” said Yotopoulos. “To be successful at innovation, companies need to be bold, move fast, be engaged and think fresh.”
CONCLUSION

At the conclusion of the event, participants were asked to share their “Dog in a Hat,” which were their biggest takeaways or “ah-ha” moments, which included:

- Innovation comes from intentional execution, not luck or genius
- Uncommon partners = new opportunities
- Agility is a mindset
- The idea of collaborative consortium to meet consumer needs
- Youthful exuberance and energy was refreshing
- Generosity is alive and well
- Co-Bot…artificial intelligence is the friend, not the enemy
- In Boulder, there is no such thing as an easy hike
- Purposeful collisions between executives and startups can spark innovation and foster authentic relationships

In the coming decade, thanks to emerging technology, the world around us will be very different.

We each have a choice:

1. Fear the future
2. Wait for the future to arrive
3. Help create the future.

WE ARE CREATORS!

Save the date for the upcoming Marketing Insights Summit—to be held Oct. 22–23, in Boulder, Colorado—the Executive Leadership Summit in partnership with the Aspen Institute—to be held Nov. 12–14, in Austin, Texas—and the Executive Summit—to be held Jan. 29–31, in Manalapan, Florida.

To learn more about The Vision Council’s Summit Series, please visit thevisioncouncil.org/summitseries.
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At Hue.Ai, our mission is to improve lives through developing reimagined vision products.

WE ARE SOLVING THE PROBLEM OF...
The optical industry currently develops lens products in a labor intensive, slow, expensive and risky way. For example, lens technology product development is often measured in decades. The industry is looking for quicker and more effective ways to innovate lens technologies.

OUR CUSTOMERS ARE...
We partner with companies on a pipeline of technology for the following end-use consumers:

- **Fashion** – specialized tints for fashion colors, visual effects, brand enhancement and anti-counterfeiting
- **Performance** – visual performance related to driving, glare, sports and lifestyle enjoyment
- **Medical** – color vision deficiencies such as color blindness, yellowing vision, wavelength-related health

We are a B2B company working with global optical companies, spanning fashion eyewear to ophthalmic lenses.

OUR SOLUTION IS...
Hue innovates lens features using a method called “Artificial Intelligence Design”. The process replaces a science team’s physical trial and error iterations. Instead, using fundamental science + data, AI searches through millions of simulated solutions for the best way to construct an optical product. We end up with more effective visual outcomes, in shorter times, and at lower cost.

WE WILL WIN BECAUSE OUR COMPETITIVE ADVANTAGE IS...
We use artificial intelligence (AI) to identify and design feature improvements, then invest in strategic IP to protect what was discovered by AI. More innovations added to the portfolio allows Hue to stack multiple features for combination products.

THE TIME IS RIGHT FOR THIS BUSINESS BECAUSE...
There is a major trend for stackable, spectral technology features with low manufacturing costs. These customers also demand that they are as cosmetically appealing as they are effective.

WE HAVE THE FOLLOWING TRACTION...
Since our founding, the Hue team has been actively engaging with the R&D or product development teams within the largest optical companies. We have several product development and licensing contracts signed or in the commercial negotiation stages.

OUR MARKET OPPORTUNITY IS...
The initial market opportunity is to serve customers with improvements in an entire class of technology (i.e., spectral tech features). We will then expand to tackle acuity related applications.

WE MAKE MONEY BY...
We work with global partners through product development and licensing partnerships.

OUR COMPETITION IS...
We competitively work to bring best-in-class lens innovation to our potential partners faster than they can develop it internally or acquire from smaller external parties.

THIS BUSINESS IS IMPORTANT TO US BECAUSE...
The Hue team strongly believes that we live in a world of abundant resources for innovation. We are excited that physical scientific exploration can be enhanced by intelligent software systems. We want to be the premier partner to usher in a world of new products that improve visual health, visual performance and make customers look good!
WE ARE SOLVING THE PROBLEM OF...
There is no consistent formalized assessment, testing or screening for cognitive impairment in the marketplace.

OUR CUSTOMERS ARE...
- Clinical customers including PCP/FP/IM, Neurology, Psychiatry, Optometry
- Non-clinical customers including Employee Wellness Benefit

OUR SOLUTION IS...
The Cognivue test consists of 10, one-minute separately scored sub-tests of four key domains. They measure tracking movement, vision, perception and memory of letters, words, shapes and motion. Through our patented adaptive psychophysics’ technology, Cognivue eliminates human error, ensuring consistency and reliability while adapting and customizing the test to each patient.

WE WILL WIN BECAUSE OUR COMPETITIVE ADVANTAGE IS...
Patient administered. Elimination of bias, human error and variability in all current cognitive testing methods. Higher sensitivity and specificity than all other paper and pencil or paper and pencil cognitive tests put onto an iPad or a computer. One low monthly subscription cost with no upfront capital or per click fee.

THE TIME IS RIGHT FOR THIS BUSINESS BECAUSE...
The scope of practice for ECPs is increasing. Most ECPs are looking for ways to add additional services and revenues. The Cognivue test provides an excellent opportunity for ECPs to engage their patients in a needed service, while adding additional revenue to their bottom line.

WE HAVE THE FOLLOWING TRACTION...
We have placement in over a 100 clinical offices and pilots at Cleveland Clinic, Dartmouth Hitchcock, Kaleida, Rochester Regional, University Hospital, HCA of FL and Diamond Healthcare. We plan to pilot with a number of eyecare providers later this summer.

OUR MARKET OPPORTUNITY IS...
The market size is over 500,000 clinicians across primary care, specialty, home healthcare and employee wellness. Additionally, there are over 30,000 ECP offices that could be potential targets.

WE MAKE MONEY BY...
Low monthly subscription model.

OUR COMPETITION IS...
MoCA, SLUMS, Braincheck, RightEye

THIS BUSINESS IS IMPORTANT TO US BECAUSE...
We have an opportunity to do well in business while doing good for patients. Cognitive decline and dementia are a major societal and healthcare issue facing the country and we have a test and a program that can help doctors test sooner driving earlier diagnosis, treatment and better incomes.
WE ARE SOLVING THE PROBLEM OF...
Finding the right frame for your face is overwhelming. The wall of glasses in stores and endless shelf pages online make it hard to know where to start. It’s made even harder because fit is so critical. Some stores don’t have styles that fit your face well, and online customers are nervous to buy without knowing how the glasses will fit. This leads to high walk-out rates in stores and low conversion rates online.

OUR CUSTOMERS ARE...
We help optical retailers and optometrists create a simpler, more exciting customer journey that helps their customers find the right frames faster and buy with more confidence.

OUR SOLUTION IS...
Our industry-leading augmented reality virtual try on, facial analysis, and frame recommendation engine is embedded into websites and used on iPads in stores to fundamentally shift how retailers sell eyewear.

WE WILL WIN BECAUSE OUR COMPETITIVE ADVANTAGE IS...
We have the most realistic try-on technology and the only one that accurately scales the glasses so you can see if they fit. We also have the world’s only machine-learning facial analysis and frame recommendation engine. Our technology is proprietary and patented. We have an insanely talented technical team of software engineers, creatives, physicists and researchers dedicated to keeping us best in class.

THE TIME IS RIGHT FOR THIS BUSINESS BECAUSE...
The retail landscape is changing quickly and the survivors will be the ones who can quickly adapt new technologies that enable them to increase sales per square foot, create compelling omnichannel journeys and even create new business models using much smaller footprints. eCommerce is picking up steam and brands who previously were nervous to go direct are all building their own sites.

WE HAVE THE FOLLOWING TRACTION...
9M unique customers create videos of their face to try-on glasses each month using our technology

OUR MARKET OPPORTUNITY IS...
We believe there is a $1B TAM for try-on and recommendation technology in the eyewear category.

WE MAKE MONEY BY...
SaaS business model; monthly recurring licensing fees for access to our technology; usually tiers up with usage.

OUR COMPETITION IS...
Fittingbox, Acep’s TryLive, Luxottica’s VTO acquired from Glasses.com and tools built in-house.

THIS BUSINESS IS IMPORTANT TO US BECAUSE...
We empower people to see the best version of themselves.
WE ARE SOLVING THE PROBLEM OF...
Growing number of patients suffering from symptoms of DES (Digital Eye Strain)

OUR CUSTOMERS ARE...
Individuals who use digital devices/screens (laptop, cellphone, tablet, etc.) for more than 2 hours/day.

OUR SOLUTION IS...
Through the device’s built-in camera (or an external camera), our software monitors the user’s eyes and posture and provides real-time feedback on 5 DES risk factors:

- **Blink Rate:** If user is not blinking enough, she will be reminded to **blink more**
- **Screen Distance:** If user is too close to the screen, she will be reminded to **adjust distance**
- **Sitting Height:** If user is sitting too high or too low, she will be reminded to **adjust sitting height**
- **Ambient Lighting:** If ambient lighting is too low, the user will be reminded to **increase lighting**
- **Screen Time:** User will be reminded when it is time to **take a break** from the screen

Our software, Dr. i-Coach, can eliminate, reduce or prevent the symptoms of DES.

WE WILL WIN BECAUSE OUR COMPETITIVE ADVANTAGE IS...
1. No other solution measures all (above) risk factors
2. No other solution provides real-time feedback to user
3. No other solution tracks user’s progress (through scoring and gamification)

THE TIME IS RIGHT FOR THIS BUSINESS BECAUSE...
- **65% of Adults & 30% of Children Experience Symptoms of Digital Eye Strain (DES)**
- **53% Of patients with dry eyes blame screen time**
- **75% of ophthalmologists have increased the number of Dry Eye diagnoses**
- **88% of ophthalmologists attribute the increase in diagnosis to digital screen usage**
- Dry Eyes common and growing among **youth**

WE HAVE THE FOLLOWING TRACTION...
LOI to license the software from the world’s largest laptop manufacturer

OUR MARKET OPPORTUNITY IS...
- Global and growing multibillion-dollar market for Dry Eyes and Digital Eye Strain
- Global and growing market of annually 300 Million new computers and 1.5 Billion new smart phones

WE MAKE MONEY BY...
For the user, the software is free for the first 3 months and then $29/year per license

OUR COMPETITION IS...
We have no direct competition that uses technology/AI to tackle the DES issue. Our competition is traditional solutions such eye drops (for dry eyes), timer software (to remind you to rest your eyes), ergonomists (to provide consultation on your posture), ergonomic furniture, etc.

THIS BUSINESS IS IMPORTANT TO US BECAUSE...
Personal reasons: Because our solution can help users experience a healthier way of using technology
Business reasons: Because Symptoms of Digital Eye Strain (DES) is Global, is Growing, is Not Going Away, is Acknowledged by Patients & Doctors and it presents a Growing International Market and Opportunity
NOVASIGHT
Israel

NovaSight brings pediatric vision care into the digital age

WE ARE SOLVING THE PROBLEM OF...
Inefficient treatment and poor assessment of pediatric vision disorders.

OUR CUSTOMERS ARE...
Vision care professionals and patients, especially children suffering from lazy eye.

OUR SOLUTION IS...
Eye tracking based medical devices for lazy eye treatment and vision assessment.

WE WILL WIN BECAUSE OUR COMPETITIVE ADVANTAGE IS...
We have the only eye tracking based solutions that enable fun and effective home treatment (no patching!) plus accurate and objective vision assessment.

THE TIME IS RIGHT FOR THIS BUSINESS BECAUSE...
Eye tracking technology is now mature and only recently affordable. We have the scientific, medical and technological expertise to leverage to create excellent devices, especially in light of the global myopia epidemic.

WE HAVE THE FOLLOWING TRACTION...
For our vision assessment device EyeSwift we had recently signed a global OEM distribution agreement with the largest player in the eye-care industry. For our treatment device CureSight we get vast interest from Pharma companies which are interested in penetrating digital therapeutics.

OUR MARKET OPPORTUNITY IS...
The three percent of the world population who suffer from lazy eye, plus the 500,000 eyecare professionals who together represent a multi-billion market.

WE MAKE MONEY BY...
Renting out the treatment device CureSight™ for $230 per month for an average period of 6 months per patient (reimbursement pathway is well defined). Additionally, we sell the vision assessment device EyeSwift® at a transfer price of $3,000 for the basic version (already 11 different vision tests) with higher cost future versions coming soon.

OUR COMPETITION IS...
Virtual reality (VR) treatment companies ie: Vivid Vision, Lumenopia – VR is not suited for children’s use. No eye tracking vision assessment exist apart from RightEye, which focuses on different markets and is very expensive.

THIS BUSINESS IS IMPORTANT TO US BECAUSE...
We are passionate about bringing an effective, high compliance solution to replace the terrible eye patching occlusion therapy and to provide an accurate, objective and easy to use vision assessment devices.
PAIR

New York City, NY

*Pair is a direct-to-consumer children’s eyewear brand that has redesigned glasses to be empowering, fashionable and customizable for kids while affordable and stress-free for parents.*

**WE ARE SOLVING THE PROBLEM OF...**

The glasses buying experience for families today is stressful, inconvenient and expensive. Glasses for kids are uninspiring, feel like a medical device and leave children without much choice.

**OUR CUSTOMERS ARE...**

Pair targets families with children, ages 6-14 who wear glasses. Today, 1 in every 4 kids wears glasses, which is 9.4 million children in the US. This is expected to double to 1 in every 2 kids by 2050.

**OUR SOLUTION IS...**

Pair designs interchangeable frames that allow children to quickly and easily change the look of their glasses anytime, anywhere. Families choose their frames at home with our try-on kit and go through an interactive digital experience that keeps children continually coming back to purchase new styles. We’ve started a movement where children share their favorite styles and designs with their friends and feel confident in their frames.

**WE WILL WIN BECAUSE OUR COMPETITIVE ADVANTAGE IS...**

We are going to win with our patent-pending product, unique brand focused on the specific needs of families and the strategic partnerships we are building for licensed top frames and within retail.

**THE TIME IS RIGHT FOR THIS BUSINESS BECAUSE...**

The number of children wearing glasses is expected to double by 2050. With a new age of millennial “Amazon” parents, we are providing vision care to families in an easy, exciting and affordable way.

**WE HAVE THE FOLLOWING TRACTION...**

In less than a year we have started an eyewear movement and we have never seen kids this excited about glasses. Pair has garnered support from celebrities and has been featured on Good Morning America, CNN, Oprah Magazine, and CNBC as the new and exciting eyewear brand for children.

**OUR MARKET OPPORTUNITY IS...**

Our market size of children who wear glasses, ages 6-14, is $1.2 billion and is rapidly growing, expected to hit $2.4 billion by 2050. Our broader market includes all adults who wear glasses in the US which is a $8 billion market and eventually the global eyewear frame market which is a $124 billion market.

**WE MAKE MONEY BY...**

Our frames are sold for $95 including prescription lenses and customizable tops are $24.95. Our average first order value is $150 and today, more than one third of customers come back within 3 months to purchase more tops leading to a high customer lifetime value. In the future, as we expand our marketplace with new designs and licensed tops, our business lends itself to a subscription model.

** OUR COMPETITION IS...**

Incumbent traditional eyewear brands (Luxottica, National Vision, etc.) and online eyewear companies (Warby Parker, Zenni, Jonas Paul).

**THIS BUSINESS IS IMPORTANT TO US BECAUSE...**

I started wearing glasses at the age of eight and found the whole experience dreadful. We set out to build a brand and experience so that children would feel excited to wear their glasses and parents would have an easy, affordable way to provide the best experience for their children.
WE ARE SOLVING THE PROBLEM OF...
The problem we are tackling is an inefficient supply chain in the eyewear frame industry, and the inability of the eyewear industry to deliver frames that are comfortable and look great on diverse face shapes and structures.

OUR CUSTOMERS ARE...
On the direct to consumer side of our business our target market is 18-30-year-olds. On the partnership side we are focused on 40+ year-olds and kids.

OUR SOLUTION IS...
Custom manufactured 3D printed eyewear.

WE WILL WIN BECAUSE OUR COMPETITIVE ADVANTAGE IS...
We have patented manufacturing technology that enables us to create high quality 3D printed eyewear at an affordable price at scale. We also have an app based custom-fitting and live virtual try-on technology that connects directly to our custom-frame production technology.

THE TIME IS RIGHT FOR THIS BUSINESS BECAUSE...
Confluence of a target market that is diverse and cares about how their eyewear looks, the penetration of depth sensing and AR technology and constantly reducing cost of 3D printing while material options are increasing.

WE HAVE THE FOLLOWING TRACTION...
We have a custom-eyewear production facility in New York. Additionally, our app custom-fitting and virtual try-on app has been downloaded by almost tens of thousands of people and has been selected as one of the top 10 eyecare apps by Apple.

OUR MARKET OPPORTUNITY IS...
On the DTC we have an opportunity to capture a growing number of young consumers who are comfortable buying eyewear online. In terms of brick and mortar, we view fit conscious older consumers and kids as an opportunity (we are not looking to create our own retail presence but rather a partnership model).

WE MAKE MONEY BY...
Selling frames directly to consumers or via ECPs.

OUR COMPETITION IS...
Enterrenched eyewear frame manufacturers. We also have competition from other custom eyewear upstarts but there are no major players in this space.

THIS BUSINESS IS IMPORTANT TO US BECAUSE...
I believe that true customization is extremely important and delivers a lot of value to customers in a category like eyewear.