Success Stories

An Update on Past Competitors, 2001-2016

From

The World’s Richest and Largest
Business Plan Competition
Capital Funding Raised:

- 3 companies have each raised $100+ million; all three are still in business.
- 29 companies have raised $10+ million. 27 (93%) are in business or have successfully exited.
- 124 businesses have raised $1+ million. 109 (88%) are successful

Of the 563 Teams Competing Since the RBPC’s Inception in 2001:

- 340 (62%) have launched.
- 177 (31%) are still in business.
- 201 (36%) are still in business or have exited successfully.
RBPC TEAMS HAVE RAISED $1.6+ BILLION IN CAPITAL FUNDING, $239+ MILLION, LAST YEAR ALONE

Of the 42 Teams Competing in 2016:

- 26 (62%) have launched.
- Collectively, the teams have raised $13.7+ million.
- 16 teams each raised $100+ thousand in the past 12 months.

The 85 Teams Competing in the RBPC Final Rounds since 2004:

- Have raised $573+ million (34%) of the total capital funding.
- 100% of our past winners that launched have been successful. Only one winning team did not launch.
- Have a 64% success rate. 54 are still in business or made successful exits.
24 RBPC COMPETITORS HAVE EXITED SUCCESSFULLY, WITH A REPORTED MARKET VALUATION OF OVER $458 MILLION
(And that’s just what we know about!)

IN THE PAST 10 MONTHS:

**Arctic Sand**
Massachusetts Institute of Technology | 2011 Competitor | Acquired by Murata Manufacturing in March 2017

**Captain U**
University of Chicago | 2009 Competitor | Acquired by Blue Star Sports in December 2016

**Helix Steel**
Formerly Polytorx | Georgia Institute of Technology | 2003 Competitor | Acquired by Pensmore Reinforcement Technologies in January 2017

**Microlution**
University of Illinois at Urbana-Champaign | 2005 Competitor | Acquired by GF Machining Solutions in May 2016

**The Eye Tribe**
Formerly Senseye | University of Copenhagen | 2012 Competitor | Acquired by Oculus/Facebook in December 2016

**TriFusion Devices | 2016 RBPC Winner**
Texas A&M University | Acquired by Essentium Materials (2010 RBPC Competitor) in October 2016

18 PREVIOUS EXITS:

**ATDynamics | 2006 RBPC Winner**
Formerly Advanced Transit Enterprises | Dartmouth College | 2006 Competitor | Acquired by Stemco in 2015

**Auditude | 2005 RBPC Winner**
University of California, Los Angeles | 2005 Competitor | Acquired by Adobe Systems in 2011

**Avanti Metal Company | 2006 Seventh Place Winner**
Harvard Kennedy School | Acquired

**BetaGlide**
Indian Institute of Technology, Kharagpur, India | 2014 Competitor | Acquired by Inshorts
**BlackLocus**
Carnegie Mellon University | 2011 Competitor | Acquired by The Home Depot in 2012

**CamGaN**
University of Cambridge | 2011 Competitor | Acquired by Plessey Semiconductors in 2012

**ClearCount Medical Solutions -- 2004 RBPC Winner**
Carnegie Mellon University | Acquired in 2014

**EcoLight**
Dartmouth College | 2012 Competitor | Acquired in July 2013

**Incept BioSystems | 2005 Third Place Winner**
University of Michigan | Acquired by ORIGIO (now CooperSurgical) in 2011

**Lumedyne Technologies**
San Diego State University | 2007 Competitor | Acquired in 2015

**Novira Therapeutics**
Formerly Molecmo Nanobiotechnologies | Harvard University | 2007 Competitor | Acquired by Johnson & Johnson in 2015

**Power2Switch**
University of Chicago | 2010 Competitor | Acquired by Choose Energy in 2013

**PrepMe Corporation**

**SCAN**
Brigham Young University | 2011 Competitor | Acquired by Snapchat in 2014

**Semprus BioSciences**
Massachusetts Institute of Technology | Finished 2nd in the 2007 RBPC | Acquired by Teleflex in 2012

**SmarterShade Inc.**
University of Notre Dame | 2011 Competitor | Acquired by VG SmartGlass in 2015

**Taxcient | 2004 Fifth Place Winner**
San Diego State University | Merged with Alavara in 2010

**WiPower**
Massachusetts Institute of Technology | 2007 Competitor | Acquired by Qualcomm in 2010
FORBES’ 30 UNDER 30 LISTS
INCLUDE 24 RBPC ALUMNI COMPANIES OR THEIR FOUNDERS

Hicor/OsComp | 2010 | MIT & Harvard University
Pumani (Rice 360) | 2010 | Rice University
Rebellion Photonics | 2010 | Rice University
PK Clean | 2011 | Massachusetts Institute of Technology
SmarterShade | 2011 | University of Notre Dame
NGen Corporation | 2012 | Stanford University
NuMat Technologies | 2012 | Northwestern University
Soko | 2012 | Massachusetts Institute of Technology
SolidEnergy Systems | 2012 | Massachusetts Institute of Technology
Citrine Informatics | 2013 | Stanford University
DATTUS | 2013 | Purdue University
Disease Diagnostic Group | 2013 | Case Western Reserve University
Owlet Baby Care | 2013 | Brigham Young University
SiNode Systems | 2013 | Northwestern University
Takachar | 2013 | Massachusetts Institute of Technology
Aidant Brands | 2014 | Rice University
KAir Energy Systems | 2014 | The Ohio State University
NVBOTS | 2014 | Massachusetts Institute of Technology
CalWave | 2015 | University of California, Berkeley
DexMat | 2015 | Rice University
Hylion | 2015 | Carnegie Mellon University
Lucelo Technologies | 2015 | The University of Texas at Austin
OPUS 12 | 2015 | Stanford University
Tembo Education | 2016 | The University of Tampa
95+ RBPC ALUMNI TEAMS RECEIVED GRANT FUNDING FROM U.S. GOVERNMENT AGENCIES

- 35 National Science Foundation (includes 6 I-Corp Program teams)
- 19 NASA (includes RBPC Awards)
- 12 U.S. Department of Energy (includes RBPC Awards)
- 8 National Institutes of Health
- 6 U.S. Food and Drug Administration
- 4 Center for Advancement of Science in Space (includes RBPC Awards)
- 4 U.S. Department of Defense
- 4 U.S. Association for International Development
- 2 National Cancer Institute
- 1 U.S. Army Research Laboratory, Army Research Office

DOE Awards:
- RBPC teams receiving grant funding or awards from the DOE have a 92% Success Rate
- Picasolar (University of Arkansas, 2013) is the only U.S. company to be awarded 3 DOE SunShot Awards. Picasolar was spun out of Silicon Solar Solutions (University of Arkansas, 2009).

NASA/CASIS RBPC Awards:
- NASA: 10 of 17 Alive for 59% Success Rate
- CASIS: 3 of 3 Alive for 100% Success Rate
- Combined: 13 of 20 for 65% Success Rate

International Space Station National Lab Project Pipeline
Projects from these companies are slated for research space in the U.S. National Laboratory on board the International Space Station:

- Quad Technologies | 2013 | Northeastern University: Ground/No Launch Info
- Aidant Brands | 2014, Second Place | Rice University: Preflight/Launch Date: TBD
- Tympanogen | 2014, Fifth Place | Tulane University: Preflight/Launch Date: TBD
- DexMat | 2015, Fifth Place | Rice University: Preflight/Launch Date: TBD
- Oncolinx | 2016, Fifth Place | Dartmouth University: Preflight/Launch Date 3/16/17

Inc. 5000 List of Fastest Growing Companies, 2016
- No. 981 is Klymit | 2008 | BYU
- No. 3020 is InContext Solutions | 2009 | University of Chicago

Deloitte’s Technology Fast 500, 2015
- OrthoAccel | 2006 | University of Illinois at Chicago
6S Medical
The University of Utah | 2015 Competitor

6S Medical LLC is designing and developing a surgical tool to close intra-abdominal defects caused during laparoscopic procedures. Their device will improve accuracy, increase safety and be more cost effective than the current standard of care.

The company recently finished a beta prototype and has started verification testing. They are headquartered in Sandy, Utah.

Acera Surgical
Washington University in St. Louis | 2014 Competitor | www.acerasurgical.com

Acera Surgical Inc. is a medical device company producing a first-in-class line of implantable electrospun surgical materials and related tools and accessories. The company has designed Cerafix™ a surgical mesh engineered for use in the neurosurgical repair of dural defects. The team is working on additional mesh products for both hernia and orthopedic surgery.

Headquartered in St. Louis, Mo., Acera Surgical presented at the 2015 Texas Life Science Venture Forum at Rice University.

Adhesys Medical
Formerly Medical Adhesive Revolution | RWTH Aachen University, Germany | 2014 Competitor | www.adhesys-medical.com

Adhesys Medical seeks to change the game of wound closure, developing one-of-its kind polyurethane-based surgical adhesives. The technology is unique as it combines ease of use, strength, flexibility and biodegradability, allowing for wound-closure on and in the body within seconds. The Adhesys team wants to bring their wound sealants into every emergency room, operating room and soldier’s medical pack, save lives, radically enhance surgical procedures and improve patient comfort.

Adhesys recently signed a licensing and supply agreement with the German pharmaceutical, Grunenthal to commercialize Adhesys’ topical adhesive in Europe and Latin America. Residents of the TMcx Accelerator at the Texas Medical Center, the company received their EN ISO certification for quality management in 3Q2016, allowing for market launch of their product.


Advano
Tulane University | 2015 Competitor | www.advanotech.com

Founded in 2014, Advano is a nanoparticle manufacturing and processing company that will disrupt the way nanoparticles are currently made. The startup features an innovative four-in-one step nanoparticle manufacturing process that is rapid, simple, efficient and highly scalable. Their process produces high quality, functionalized nanoparticles that are more affordably made than those at the current market price.

By entering into a sponsored research agreement with Tulane University, Advano is advancing development of their silicon nanoparticles to improve lithium-ion batteries. They have signed letters of intent and memoranda of understanding with four customers and partnered with the Argonne National Laboratory. Funded through grants and angel investment, Advano is part of the New Orleans BioInnovation Center community.
Aftohn
Formerly Detonation Dynamics | The University of Texas at Arlington | 2014 Competitor | www.aftohn.com

Aftohn aims to solve the problem of lack of access to grid-electricity across the developing world by providing consumers with a heat and power generator that is twice as efficient and at least five times as affordable as any competing product currently available. Their on-grid customers can slash energy bills by up to 25 percent, while their off-grid customers will have a sustainable source of resilient power.

Aftohn was a MIT Clean Energy Prize semifinalist and was featured on Inc.com as one of the 50 Emerging Global Entrepreneurs to Watch. They received a grant from VentureWell and are part of the Clinton Global Initiative University.

Aidant Brands
Formerly A-76 Technologies | Rice University | 2014 Competitor | www.RustPatrol.com

Aidant Brands is an anti-corrosion coatings and lubricants manufacturing company, providing solutions to a wide range of industries, including oil and gas, maritime and household applications.

Aidant Brands products include the Rust Patrol line, including Rust Patrol, Rust Patrol: No VOCs and Rust Patrol: Incorrustible. The Rust Patrol products are ideal for protecting equipment from corrosion in high-humidity, high salinity environments. Additionally, Rust Patrol: No VOCs is a variation of the formula that contains no volatile organic compounds (VOCs) and can help to improve worker health and safety while meeting environmental regulations.

Co-founder Lauren Thompson was recognized on Forbes’ 2015 30 Under 30 list in Energy. The second place winners at the 2014 RBPC have been featured in numerous local and national publications, including the Houston Business Journal, FORTUNE and Forbes. Currently listed in preflight status on the International Space Station Lab project pipeline, A-76 is headquartered in Houston.

Airzz
Indiana University | 2015 Competitor | www.airzz.co

Airzz designs and produces a cutting edge, simple and smart air-cooling solution. Their product is as inexpensive and energy efficient as a home fan, and it enables cold airflow similar to a mobile air conditioner. Airzz is a cooling solution that will make air conditioning available to everyone, everywhere in the world.
Ambiq Micro
University of Michigan | 2010 Competitor | www.ambiqmicro.com

Ambiq Micro was founded in 2010 on the notion that extremely low power semiconductors are the key the future of electronics. The company developed a Subthreshold Power Optimized Technology (SPOT™) platform that dramatically reduces the amount of power consumed by semiconductors. Their ultra-low power real-time clock (RTC) and microcontroller (MCU) products are key enablers for many different markets including wearables, smart cards, wireless sensors and Internet of Things.

Ambiq recently celebrated their third product launch -- hard on the heels of their second product, released a mere 18 months earlier. The new product is twice as fast and three times more energy efficient than the company’s previous release.

Via a 3Q2016 distribution agreement, Fujitsu Electronics markets the Ambiq Micro Apollo family of microcontrollers and real-time clocks in Europe and Asia. The Fossil Group uses Ambiq’s microprocessor in a wide range of smartwatches from brands Fossil, Skagen and Misfit.

Ambiq Micro was a finalist in the 2010 Rice Business Plan Competition and is based in Austin, Texas.

Antenatal Screening Kit
Developed at Jhpiego | Johns Hopkins University | 2011 Competitor

Antenatal Screening Kit has developed an affordable diagnosis to screen pregnant women for readily treatable but potentially fatal conditions including preeclampsia, anemia and gestational diabetes. The self-screening kit will be used in developing countries where access to diagnostic techniques can be limited and expensive.

The developers won the 2013 Maternal Health Challenge sponsored by ABC News, the Lemelson Foundation and the Duke Global Health Institute. Following its public debut at NCIIA’s Open Minds 2011 showcase of student innovation, Antenatal Screening Kit was selected as a Popular Science Invention of the Year.

Antenatal Screening participated in the 2011 RBPC as a social venture. The technology is no longer being advanced by a business entity but is being developed under the auspices of Jhpiego, an international nonprofit health organization affiliated with The Johns Hopkins University. They are partnering with a team of biomedical engineers at the Technology Exchange Lab to finalize the design.
Aqdot
University of Cambridge, England | 2013 Competitor | www.aqdot.com

Aqdot is a specialist chemical company with a focus and expertise in intelligent encapsulation technology. Their proprietary technology and know-how enables valuable active products to be protected, delivered and chemically programmed to release where and when required.

Spun out of Cambridge University, Aqdot’s technology has the potential to be game-changing in a wide range of industries, including household products such as detergents, pharmaceuticals, oil and gas, agrochemicals, cosmetics, food, paint, fragrances and personal products. Identifying unmet needs in these sectors, Aqdot develops products that enable its customers to introduce novel and differentiated brands, reduce manufacturing costs and make a truly positive impact on the environment. The Aqdot team is currently focusing their efforts on scaling up manufacturing capacity.

Featured in Chemical and Engineering News, The Engineer and Cambridge University Research News, Aqdot has three material transfer agreements signed with three first-tier companies. They won the Royal Society of Chemistry’s Emerging Technologies competition in 2013.

The company is based in Cambridge, England and is funded, in part, by the United Kingdom’s Royal Society of Chemistry. Company mentors hail from GlaxoSmithKline and Proctor & Gamble.

ArborVita Associates
University of Chicago | 2012 Competitor | www.arborvitaassociates.com

AVA has created a Direct, Rapid and Precise (DRAP) way to modify the genomes of experimental animals or cells via homologous recombination utilizing a unique, recombinase isolated and cloned from Drosophila and small synthetic targeting DNAs. The process has been applied in three vertebrate species that include mice and pigs.

The DRAP method is efficient and has advantages over competing technologies - principally because it modifies an endogenous locus without the need for large, complex DNA constructs or reliance upon viral vectors that insert randomly or require the insertion of foreign sequences in the genome. The DRAP method has potential for creating new animal models for drug development and testing, xenotransplantation as well as for clinical applications in humans.
Arctic Sand
Massachusetts Institute of Technology | 2011 Competitor | www.arcticsand.com

Arctic Sand is a fabless semiconductor company with a high-quality, high-volume and cost-effective supply chain. Its supply chain partners include TSMC and the world’s leading players in wafer production, test and packaging technology.

The company’s initial product roadmap is focused on power conversion for LED display backlighting and microprocessors for mobile applications such as smartphones, tablets and ultrabooks. Its technology is highly flexible and will soon be applied to broader applications such as servers, storage and networking, and integrated within processors and ASICs.

To date, they have amassed 15 patents and completed their Series B funding round. The MIT spinout received the Best Venture Award at the National Renewable Energy Laboratory’s 24th Industry Growth Forum and was an of EE Times Silicon 60 – Hot Startups to Watch. The company was also a Northeast Regional Cleantech Open Winner.

In October 2016, Arctic Sand signed Wikeng as an Asian distributor and released their ARC2C0608 LED Boost for notebooks and tablets. This release will reduce power loss by half. A graduate of the North Shore InnoVentures’ incubator, Arctic Sand is headquartered in Cambridge, Massachusetts. They have a second design center in Santa Clara, California.

Japan’s Murata Manufacturing acquired Arctic Sand in March 2017. Murata is an existing investor in Arctic Sand, leading a Series B round in 2016.

Are You a Human
University of Michigan | 2011 Competitor | www.areyouahuman.com

Are You a Human is the curator of The Verified Human Whitelist™, which allows anyone using it to be certain they are addressing a verified human before they serve content, services or ads.

Instead of searching for bots, which evolve in a matter of days, Are You a Human finds and verifies humans by analyzing natural user behavior across hundreds of thousands of websites. After the company has consistently seen and verified a user as human, they’re added to the Whitelist™ and then re-verified over and over again each day. Bots can’t consistently look and act like real humans on every page, every day, so they’re never added to the list.

Are You a Human now analyzes natural interaction in any environment and helps more than a million websites validate their traffic. In March 2016, the company sold their video platform, TruEngage to PK4 Media.

The company placed second at the 2011 Rice Business Plan Competition and has been featured in PC Magazine, VentureBeat, Rolling Stone, and Forbes and on CBS News (Detroit). The Detroit, Michigan, company counts automakers Chevrolet and Ford among its clients.
Arovia
Rice University | 2016 Competitor | www.arovia.io

Arovia makes the world’s first foldable television. Their first product, SPUD (Spontaneous Pop Up Display) is a high resolution, 24 inch screen that collapses to the size of book and expands like an umbrella. SPUD easily connects to a phone, tablet or laptop and will run on battery power for up to 10 hours.

Arovia owns the intellectual property, and the technology is currently patent pending. Two additional Patent Cooperation Treaty (PCT) utility patents have been filed.

With a grant from the National Science Foundation and a successful Kickstarter campaign under their belt, Houston-based Arovia is in market discussions with major retailers.

Ascent Technologies
The University of Chicago | 2016 Competitor | www.ascentregtech.com

Ascent Technologies is a RegTech firm helping customers simplify and automate their regulatory compliance processes and reporting. Its SaaS/IaaS platform integrates a proprietary data set with powerful natural language processing and predictive analytics to construct firm-specific regulatory "backbones" that provide targeted intelligence based on each company's business activities. Continuously evolving as relevant regulations change, this backbone underpins a single ecosystem in which customers can manage the entirety of their regulatory obligations to realize cost savings and efficiency gains of up to 40 percent.

Chicago-based Ascent has filed 14 patents and provisional patents. Currently in private beta, they plan to launch a public beta for financial service firms in March of 2017. The company is working with beta clients across multiple client verticals including trading companies, exchanges and clearing firms. The Ascent team will use funds from a successful third quarter 2016 funding round for operations, hiring and streamlining their platform.

ATDynamics
Formerly Advanced Transit Enterprises | Dartmouth College | 2006 Competitor

ATDynamics is the leading global supplier of semi-trailer, rear-drag trailer aerodynamics technology. The company is reducing the fuel consumption and associated greenhouse gas emissions of leading North American trucking fleets by 12 percent. Its TrailerTail® rear-drag aerodynamics technology will deliver over $20 billion in fuel savings to trucking companies and consumers over the next decade by streamlining the airflow at the back of two million long-haul semitrailers pulled on U.S. and international highways.

ATDynamics was named to the Inc. 500, Inc. magazine's annual list of America’s fastest growing private companies in 2013. Based in Hayward, California, ATDynamics won first place at the 2006 Rice Business Plan Competition.

In 2015, ATDynamics was acquired by Stemco, maker of commercial vehicle wheel end, braking and suspension components. Stemco is a subsidiary of EnPro Industries, Inc. EnPro is a leader in sealing products, metal polymer and filament wound bearings, components and service for reciprocating compressors, diesel and dual-fuel engines and other engineered products for use in critical applications by industries worldwide.
Atterx BioTherapeutics
Formerly ConjuGon | University of Wisconsin | 2002 Competitor | www.atterx.com

Atterx has developed two products to fight multidrug resistant, Gram-negative bacteria. Its first product, C-1205, utilizes bacterial interference technology to prevent catheter associated urinary tract infections. Atterx has an Investigational New Drug application on file with the Food and Drug Administration and is poised to enter Phase Ib clinical trials. Their other core technology consists of using the natural process of bacterial conjugation to treat infection. The product GN-4474 has been developed using this technology to target Gram-negative bacteria. It has been shown to be effective in animal infection models and an investigational new drug filing was expected in 2015.

Atterx performs most of its research and development operations at its corporate headquarters in Madison, Wisconsin. Funded in part by equity financing and grants from the U.S. Department of Defense, it contracts with leading pharmaceutical, manufacturing, clinical research and regulatory experts nationwide to advance its products.

Auditude
The University of California, Los Angeles | 2005 Competitor

Auditude was the leading video advertising technology and monetization partner for premium content owners and distributors. They maximized the value of video content while decreasing operational cost and ensuring a positive advertising experience for consumers anywhere they view video. Auditude worked with marquee broadcast and professional content companies including Comcast, Major League Baseball and Fox News.

In 2011, Auditude spun out a social TV app business called IntoNow. Based on the SoundPrint platform, IntoNow gives users the ability to almost instantly recognize TV content and then helps them share and discuss those shows with friends, both within the product and through social networks such as Facebook and Twitter.

In November 2011, Auditude was acquired by Adobe Systems. Adobe is based in Palo Alto with offices in Chicago, Los Angeles, New York City and London.

Aura Biosciences
Massachusetts Institute of Technology | 2008 Competitor | www.aurabiosciences.com

Aura Biosciences is developing a new class of therapies to target and destroy cancer cells selectively. Its lead program, AU-011 in ocular melanoma (OM), is being developed under a CRADA with the National Cancer Institute (NCI).

AU-011 is a first-in-class targeted therapy in development for the primary treatment of ocular melanoma (OM), also known as uveal or choroidal melanoma, a rare and life-threatening disease. The therapy consists of viral nanoparticle conjugates that bind selectively to cancer cells in the eye. AU-011 has a necrotic mechanism of action and is administered through an intravitreal injection into the eye. Upon activation with an ophthalmic laser, the drug rapidly and specifically destroys the membranes of tumor cells while sparing key eye structures, which may allow for the potential of preserving patients’ vision. In February 2017, the FDA granted Aura Biosciences IND clearance for their therapy targeting cancer cells in ocular melanoma, enabling Aura to begin initial clinical testing of AU-011.

Listed as one of the 25 Women-Run Startups to Watch, the company was selected as Technology Pioneer by the World Economic Forum. They were featured in The Wall Street Journal and were named a Top Technology Innovator of the Year in Time magazine. Aura’s headquarters are located in the biotech cluster of Cambridge, Massachusetts.
Avanti Metal Company
Harvard University | 2006 Competitor

Avanti Metal produced titanium to sell at one-tenth of the current price, using one-half of the current capital and with one-hundredth of the hazardous waste and pollution of other producers. This lightweight, white metal is used in aircraft, ships and spacecraft. Avanti’s technology is based on Sadoway processes developed by Dr. Donald Sadoway, a world-renowned expert in electrochemistry at the Massachusetts Institute of Technology. The small startup’s early capital was funded through a grant from the MIT Deshpande Center for Technological Innovation.

Avanti Metal Company was sold to an international company specializing in metal production.

Avello Bioenergy
Iowa State University of Science and Technology | 2009 Competitor | www.avellobioenergy.com

Using technology licensed from Iowa State University Research Foundation, Avello Bioenergy transforms conventional biomass fast pyrolysis products into quality, low-cost, profitable feedstocks for renewable chemical, material and energy applications compared to conventional biomass fast pyrolysis products. (Pyrolysis is the thermochemical decomposition of organic matter.) Compared to conventional pyrolysis oil, Avello’s products are less corrosive, more stable and easily upgraded.

One of Avello’s products is a bioasphalt® binder, made from wood-based, fractionated pyrolysis oil. The also produce Biofuel Oil, a stable, low carbon liquid fuel oil for direct fossil fuel replacement or blending; biochar, used as an additive to soil, as a renewable fuel or as a potential carbon sequestration agent; and chemical feedstock for specialty markets.

Avello has been featured in publications such as Biorefining Magazine, Biofuels Digest and Canadian Biomass Magazine. The company occupies laboratory space at the BioCentury Research Farm in central Iowa.

Avitus Orthopaedics
Formerly BOSS Medical | Johns Hopkins University | 2011 Competitor | www.avitusortho.com

Avitus Orthopaedics Inc. is a medical device startup developing new orthopedic technologies. The company is developing a novel surgical device that will enable surgeons to use gold standard autologous bone graft material. Current bone graft solutions are suboptimal in terms of efficacy, safety and cost. Avitus will provide the optimal bone grafting solution in order to improve the lives of its patients worldwide.

In 2016, The Avitus Bone Harvester was approved by the U.S. Food and Drug Administration. The company is launching a Series B round to foster sales in international markets. They have been awarded additional grants from the National Science Foundation, the Johns Hopkins Technology Accelerator Fund, the Maryland Innovation Initiative, the Coupler Translational Partnership Award, the Maryland University Development Technology Fund (TEDCO) and the NCIIA.

Based in Baltimore, Md., Avitus Orthopaedics was founded in 2011 by a group of biomedical engineers from The Johns Hopkins University Center for Bioengineering Innovation and Design and leading spinal surgeons from Hopkins Medical Institute.
Bazo’s Fresh Mexican Grill  
Formerly Taco Tikka | The University of North Carolina at Chapel Hill | 2004 Competitor | www.bazosgrill.com

Bazo’s Fresh Mexican Grill serves fresh, high quality Baja-style Mexican fare in a fast and casual setting. Based in Louisville, Ky., the company currently operates four corporate locations with over $1 million in annual sales. Bazo’s Fresh Mexican Grill offers franchise opportunities throughout Kentucky and surrounding areas.

Bennu  
Baruch College | 2010 Competitor

Bennu is the leader in green social media marketing. Their company was started in 2010 by a diverse group of social entrepreneurs who met while pursuing their MBAs in New York City. Having previously worked on groundbreaking sustainability projects, the team was united by a common passion: using business to tackle social and environmental problems.

Inspired by the disturbing amount of waste — particularly plastic bottles — being sent to landfills as trash, Bennu launched by developing recycled promotional products that prevent landfill dumping, save energy and serve practical consumer needs. At the same time, their goal was to educate people about the environmental, social and economic value of sustainability. Social media presented the ideal communication channel to engage a community who shared Bennu’s values and beliefs.

Bennu continues to evolve, expanding from promotional products to social media marketing services, including their rapidly growing Green Business Bureau sustainability analytics software. They have been featured in major press outlets including VentureBeat, Forbes, Fast Company and C-SPAN. Headquartered in New York, their clients range from multinational corporations to startups that embrace business sustainability as a competitive advantage.

BetaGlide/rention.ai  
Indian Institute of Technology, Kharagpur, India | 2014 Competitor

BetaGlide created retention.ai, a mobile app testing platform. The platform allowed other app developers to gather real-time information about their systems usage and app behavior to improve stability and performance. retention.ai’s testing platform tracks users’ uninstalls and events and can measure the marketing efficiency of acquisition channels.

With offices in Palo Alto and Bengaluru (Bangalore), India, BetaGlide was featured in major media blogs and channels in India, including The Times of India, The Economic Times, The Hindu, The Indian Express, The Financial Express, VC Circle and India Digital Review. NASSCOM recognized them as being in the top 8 percent of IT startups in India.

In 2015, BetaGlide was acquired by Inshorts, creator of a content distribution app. The acquisition amount was not disclosed.
BioAesthetics  
*Tulane University | 2016 Competitor | www.bio-aesthetics.com*

BioAesthetics was founded in 2015 as a Tulane University spinout with the mission to improve reconstruction options for breast cancer patients after they undergo mastectomies.

The BioAesthetics’ initial product is a tissue-engineered nipple-areolar complex (NAC). This product will be provided to plastic and reconstructive surgeons as an off-the-shelf ready, acellular, NAC graft. During the breast reconstruction phase, after a mastectomy, the surgeon would engraf the NAC graft in position onto the patient’s reconstructed breast. The patient’s body would then use this NAC graft as a building frame to regenerate their own NAC. This patent-pending product is currently in the pre-clinical phase.

They are competing in the 2017 JEDCO (Jefferson Parish Economic Development Commission) Challenge. Headquartered in New Orleans, Louisiana, BioAesthetics is a National Science Foundation I-Corps company.

Biogas & Electric  
*University of California, Los Angeles | 2010 Competitor | www.biogasandelectric.com*

Biogas & Electric is developing NOxRx®, an air pollution control device for stationary biogas engines. NOxRx® is a low cost solution to nitrogen oxide emissions from biogas engines operating at anaerobic digesters at wastewater treatment facilities and large concentrated animal feeding operations. The biomass industry is under considerable pressure to reduce emissions such as NOX, a greenhouse gas that is 300 times more damaging to the atmosphere than CO₂. In 2010, Biogas & Electric established proof of concept. This represented a significant achievement for the industry since competing NOX reduction technologies are expensive and have difficulty meeting the stringent regulations set forth by regional air quality boards.

Based in San Diego, California, Biogas & Electric is completing a beta installation at the Bakersfield Wastewater Treatment Plant and is preparing for its third installation at the Palm Springs Wastewater Treatment Plant.

BiologicsMD  
*University of Arkansas | 2010 Competitor | www.biologicsmd.com*

Based in Fayetteville, Arkansas, BiologicsMD™ is a preclinical therapeutic development company focused on highly targeted or ‘smart’ therapies for hair loss and bone disorders.

The company is developing a series of recombinant fusion proteins that provide powerful stimulatory effects directly to the target receptors at the point of disease – and do so with sustained therapeutic exposure in either a single dose or very infrequent dosing regimens. The company is working on formulation and delivery vehicles that can accommodate parenteral, local, and topical administration.

BiologicsMD has an exclusive license from the Board of Trustees of the University of Arkansas, the Ochsner Clinic Foundation, and the National University Corporation Kagawa University (Japan) to develop new biologics that involve the molecular fusion of parathyroid hormone (PTH) with a collagenase Collagen Binding Domain (CBD). Importantly, the CBD selectively binds to type I collagen, thus delivering PTH directly to the bone or the hair follicle, where it can be most effective in building new bone or stimulating hair growth. This CBD-derived targeting also provides for a long-acting therapeutic, thereby enabling single or infrequent dosing for chronic disorders.

Grand prizewinner of the 2010 RBPC, Biologics added another patent to their growing IP estate in 2015. BiologicsMD is a VIC Technology Venture Development™ portfolio company.
**BioLum Sciences**  
Southern Methodist University | 2015 Competitor | www.biolumsciences.com

BioLum is developing a medical device used to help manage asthma, revolutionizing the way asthma is diagnosed and making the chronic illness easier to handle on a day-to-day basis. They use a smartphone-based imaging system that uses optical light-up probes to detect and quantify disease biomarkers found in exhaled breath condensate.

BioLum’s device will enable users to monitor their condition through a mobile health platform, which will indicate lung condition and lung function. The point-of-care, time lapse imaging system consists of a low cost, light-sealed imaging device that is used in conjunction with a smartphone. The chemiluminescent diagnostic platform allows portable, on-site patient testing that provides results in less than one minute.

Additionally, BioLum’s smartphone-integrated technology will be able to collect data about asthma patients, medication and treatment, regional data across the country and different asthma environments. This offers an opportunity to collect data on a chronic illness that affects a large percentage of the population that we have never had the ability to test.

Dallas-based BioLum’s device won the top prize at the Global Student Entrepreneur Awards, and the company was featured in D-healthcare Magazine.

**BlackLocus**  
Carnegie Mellon University | 2011 Competitor | www.blacklocus.com

BlackLocus developed a SaaS (software as a service) price optimization platform, offering powerful and affordable e-commerce competitive pricing analysis to customers ranging from small businesses to those on the Internet Retailer 500.

Powered by collaboration with industry experts and human-computer interaction researchers, BlackLocus deployed sophisticated machine learning and revenue management techniques in a pricing-as-a-service model, enabling small and mid-sized online retailers to compete with larger and/or more established players.

BlackLocus was named Startup to Watch by Inc. in 2012, and the company was featured in publications including The Wall Street Journal, Tech Crunch and GigaOm. In 2012, BlackLocus was acquired by Home Depot, a mere 20 months after competing in the 2011 Rice Business Plan Competition. Black Locus has become The Home Depot’s Innovation Lab and remains in Austin, Texas.

**Blue Nano**  
Formerly Filigree Nanotech | Wake Forest University | 2008 Competitor

Blue Nano is an advanced nanomaterials manufacturer of silver nanowires for the transparent conductor industry and porous noble metal nanomaterials.

Blue Nano’s patented process brings down material manufacturing costs dramatically and enhances performance of end-products. Blue Nano is focused on the transparent conductor, bio-medical and energy industries. Blue Nano currently manufactures nanowires and porous noble metal nanostructures that provide tremendous surface area with less material.

Growing organically through sale of its materials, Blue Nano continues to add new customers, many of who are FORTUNE 100 companies. They have also added Seika Corporation, a subsidiary of Mitsubishi Heavy Industry, as their distributor in Japan. The company is based in Charlotte, North Carolina.
**Bold Diagnostics**  
Northwestern University | 2016 Competitor | http://www.bolddiagnostics.com

Bold Diagnostics is a medical device company developing an intelligent, diagnostic platform for blood pressure monitoring. They are designing a comfortable monitoring system provides patients with their blood pressure trends. The comprehensive reports generated by Bold’s system will be seamlessly uploaded to a patient’s electronic medical record (EMR), allowing clinicians to have honest conversations with their patients about their actual cardiovascular disease risk while comfortably integrating into a patient's everyday life.

Bold was created within Northwestern University's Center for Device Development Graduate Fellowship Program (CD2). The company is managed by a well-qualified team of engineers, clinicians and entrepreneurs, with extensive business and medical device experience.

After finishing fourth at the 2016 RBPC, Bold was awarded a Small Business Innovation Research Phase I Research grant from the National Science Foundation to finance a next phase prototype. Headquartered in Chicago, Illinois, they have an exclusive license with Northwestern University and have two patents on file. Bold is currently in full trial mode.

**Boom Algae**  
Formerly Superior Ecotech | University of Colorado, Boulder | 2014 Competitor | boomalgae.com

Boom Algae is a cleantech startup based in Boulder, Colorado. They grow algae using a photosynthetic process that converts CO\(^2\) waste from beer fermentation into algae rich in omega-3 oil and other high-value natural products. Their proprietary biofilm-based, low-footprint technology allows them to produce algae at half the operating costs of their competitors. The patent-pending technology reduces costs associated with both algae drying and greenhouse heating and cooling. Boom Algae’s technology and algae products have been validated by third party analysis and peer-reviewed scientific journals.

Currently, the company is working with Upslope Brewing to produce an algae strain for a biodegradable, algae-based ink produced by Living Ink Technologies. In addition to winning the Department of Energy Clean Energy Prize, the company received a grant from the Boulder Energy Challenge Grant program and first place in the University of Colorado, Denver Business Plan competition.

**Boomalang**  
Vanderbilt University | 2015 Competitor | www.boomalang.co

Boomalang is an online language exchange platform. They connect native speakers from different cultures to improve conversational fluency through live video chat. With minimally guided conversation content relevant to the matched pair, Boomalang simulates a natural language learning experience.

Since competing in the RBPC, Boomalang earned their first revenue and extended user trials with six partner universities: three in the U.S. and three in Latin America. They are based in Nashville, Tennessee.
Briteseed
Northwestern University | 2013 Competitor | www.briteseed.com

Briteseed LLC is a Chicago-based medical device company developing SafeSnips™. SafeSnips is a forward-thinking technology that puts sense into surgical cutting tools. By integrating blood vessel detection technology with existing surgical cutting tools, SafeSnips can find vessels at risk of uncontrolled bleeding even where tactile feedback is unavailable. By utilizing near-infrared spectroscopy sensors integrated into the tips of cutting tools, such as energy devices, SafeSnips identify the presence and diameter of blood vessels in the immediate cutting area. Surgeons are alerted via video monitors currently used in the operating room.

Briteseed was born out of the 2011–2012 NUvention at Northwestern University. The company has been featured in the Chicago Tribune, FORTUNE, Tech Cocktail, Crain’s Chicago Business and the Chicago Sun-Times.

The Kaufman Foundation named Briteseed a Top 5 Entrepreneur, and, in 2016, the MPMN Medtech Pulse named them one of the 10 Most Promising Technologies of 2016. In addition, the company is a VentureWell grant recipient and received the MedTech Innovator award. Briteseed placed second in the 2013 Rice Business Plan Competition.

C3Nano
Stanford University | 2010 Competitor | www.c3nano.com

Founded in 2010 as a spinout from Professor Zhenan Bao’s chemical engineering laboratory at Stanford University, C3Nano is the developer of the solution-based, transparent conductive inks and films as direct replacements for indium tin oxide (ITO).

With the introduction of Activegrid™ transparent conductive films (TCFs) and inks, C3Nano has succeeded in shattering the ITO performance barrier to achieve industry-leading conductivity and transparency in TCFs and inks. Activegrid™ offers product designers and manufacturers a development path to meet increasing demand for smarter, flexible touch sensor applications for the consumer electronics industry and beyond.

C3Nano Inc. announced the issuance of two patents by the United States Patent and Trademark Office on November 17, 2015. The patents cover the use of the C3Nano’s proprietary NanoGlue™ and its transparent conductive ActiveGrid™ ink and films. C3Nano is headquartered in Silicon Valley with an industry leading manufacturing base in Korea.

CalWave Power Technologies
University of California, Berkeley | http://calwave.org

CalWave provides a solution to harness the renewable power of ocean waves to produce electricity and freshwater. Their device is a novel Wave Energy Converter (WEC) called the WaveCarpet that is simple and scalable. Their innovative approach was inspired by the ability of a muddy seafloor to effectively absorb overpassing ocean waves within only a few wavelengths. The unique converter design uses a synthetic-seabed-carpet that has the ability to extract wave energy the same way. The WaveCarpet operates submerged, allowing it to survive stormy seas while causing no visual pollution or posing any collision danger.

**CamGaN**
*University of Cambridge | 2011 Competitor*

A spinout from the Department of Materials Science at the University of Cambridge, CamGaN developed low-cost, gallium nitride white LEDs (light-emitting diodes) for use on standard and readily available silicon substrates.

In 2012, CamGaN was acquired by Plessey, which manufactures semiconductor products used in sensing, measurement and control applications. The company will produce LEDs based on CamGaN’s proprietary GaN-on-silicon technology at its processing facility in Plymouth, England.

**CaptainU**
*University of Chicago | 2009 Competitor | www.captainu.com*

CaptainU helps millions of athletes compete at the next level. CaptainU was founded in 2008 by Avi Stopper & Michael Farb at the University of Chicago, and has offices in Denver, Colorado and San Francisco, California. The CaptainU platform provides athletic development and recruiting tools for millions of athletes, youth and club teams, events and college programs.

The company has never taken any outside capital. They are fully bootstrapped and profitable. The company has been featured in The New York Times, CNN and Fox Business News.

In December 2016, Captain U was acquired by Blue Star Sports. Based in Frisco, Texas, Blue Star manages youth sports through its platform for youth leagues, clubs, associations and their national governing entities. As part of the merger, RBPC alumni Avi Stopper and Michael Farb will step into executive roles at Blue Star Sports while continuing in their existing roles as CaptainU’s CEO and COO.

**Cemsica**
*University of Pennsylvania | 2016 Competitor*

Cemsica is developing a novel low-cost carbon capturing technology for energy industry. This technology will have a large advantage over currently available commercial technologies by providing a 55 percent cheaper alternative that demonstrates enhanced performance and reduced energy consumption.

Cemsica is a Wharton Venture Initiation Program portfolio company and a finalist at the 2017 CleanTech Challenge.
CEON Solutions
Indian Institute of Information Technology and Management, Gwalior | 2004 Competitor | http://ceon.in

CEON is the pioneer and leading provider of integrated education process management solutions and consultancy to educational institutions. CEON offers accurate real time information and knowledge management systems to parents, teachers, students and management.

Its flagship products, iSchool and iCampus, are aligned to meet the needs and budgets of diverse schools and colleges. iSchool believes that each child has potential and can be groomed to excellence. Their modules are designed to help educators and parents manage, analyze and assist in the multidimensional growth of students over the years. An extension of iSchool, iCampus provides automation software for colleges and universities across India.

CEON Solutions is currently operating across India and in three additional countries. Their software won five national open software contests at various IITs. CEON was named one of the hottest entrepreneur startups of India by Nen Technologies. Because of its success, they have been featured in the Indian national dailies such as the Times of India and The Business Standard. CEON maintains offices in Ahmedabad, Delhi and Patna, India.

Chipotle Business Group
The University of Texas at Austin | 2004 Competitor | www.chipotlegroup.com

Chipotle Business Group, Inc. (CBGI) is a creator of innovative global water-testing solutions. CBGI’s cutting edge technologies offer fast, accurate water testing solutions that are cost-effective and easy to use. Working in concert with state, national, international agencies and philanthropic organizations, along with best-in-class researchers, developers and service providers, CBGI helps to ensure industrialized and remote communities worldwide can have safe drinking water and clean recreational water supplies.

The National Science Foundation awarded the company a Partnerships for Innovation: Accelerating Innovation Research-Technology Translation grant in June 2014. U.S. Patent No. 8735142 for analyzing arsenic was issued to CBGI in May 2014. Derrick Charbonnet, the company’s COO and inventor, was a Tech Titan Finalist in the Technology Inventors’ category in both 2011 and 2012. Chipotle Business Group is a privately held firm incorporated in Texas, with offices in Texas and Mississippi.

Citrine Informatics
Formerly Big Science | Stanford University | 2013 Competitor | www.citrine.io

Citrine Informatics is an information platform company for the materials and chemicals industry. Citrine’s machine learning-based platform mines vast quantities of data about materials, chemicals and processes to help customers hit research and development and manufacturing targets in half the time.

Their platform ingests and analyzes vast quantities of technical data on materials, chemicals and devices to streamline research and development, manufacturing and supply chain operations for any organization that produces a physical product. Citrine’s users are scientists and engineers at large manufacturing and materials companies, as well as researchers at universities and government labs, and their platform is an essential workflow tool that enables these users to analyze tremendous quantities of technical data.

Selected to the 2017 AI100 by CBInsights, Citrine partners with the U.S. Department of Energy to develop new materials and devices for multicaloric refrigeration. Founder Greg Mulholland was recognized in Forbes’ 2015 list of 30 Under 30 in Energy. Citrine is based in Redwood City, California.
ClearCount Medical Solutions
Carnegie Mellon University | 2004 Competitor

Pittsburgh-based ClearCount Medical Solutions developed a radiofrequency identification (RFID) tracking system for the surgical operating room. They assembled an extendable RFID-based platform to improve efficiency while preventing medical errors. ClearCount’s SmartSponge and SmartWand-DTX systems are the only RFID-enabled systems for counting and detecting surgical sponges.

ClearCount’s technology was recognized by Popular Science as one of the top 100 innovations of 2009. It received both The Wall Street Journal Technology Innovation Award and the International Design Excellence Award. The company has received additional recognition from Time and WIRED magazines.

In 2014, ClearCount was acquired. Details concerning the sale have been kept confidential.

CommSense
Purdue University | 2014 Competitor | www.commsensellc.com

CommSense is a sensor company that is developing a game-changing sensor for wireless systems that can detect the environment around an antenna. Using the antenna itself to detect its surroundings, CommSense’s technology can sense how a smartphone is being held in real time and use this information to allow increased power efficiency, longer battery life and better signal strength. Not just limited to smartphones, another application improves the efficiency of electron volt (EV) wireless chargers to both save energy and consumer electricity costs.

Prototypes have been developed and demonstrated for smartphone sensing and EV wireless charging applications. A patent has also been filed. CommSense is based in Lafayette, Indiana.

CoolComposites
Formerly CoolFlux | Massachusetts Institute of Technology | 2015 Competitor | www.coolcomposites.com

CoolComposites is developing CoolFlux, a drop-in additive for building materials like foam insulation that automatically improves thermal performance without any hassle to the contractor or building owner. A thermally-reversible, inorganic phase-change material, CoolFlux absorbs heat during the day and releases it overnight, recharging itself for the next day.

CoolComposites took home the gold from the 2016 MassChallenge. They placed second in the 2015 MIT Institute for Soldier Nanotechnology Soldier Design Competition for improving energy efficiency in U.S. Army barracks and won the Infrastructure and Resources Track award at the MIT Clean Energy Prize.

CorInnova
Texas A&M University | 2005 Competitor | http://jlabs.jnjinnovation.com/partners/corinnova

CorInnova is a preclinical stage medical device company that has developed a breakthrough technological platform for the treatment of heart failure. CardiacSTAR™, the flagship product under development, will be the first cardiac assist device in the market to promote heart recovery by enforcing correct cardiac motion. The device does not touch the blood, making it significantly safer than left ventricular assist devices, which have a high rate of stroke and bleeding.

They received seed funding and grants from the National Science Foundation and from the National Institutes of Health. CorInnova holds four approved U.S. patents. Having successfully manufactured prototypes of the device, the company is in the final stages of pre-clinical work and pursuing first-in-human studies. Houston, Texas-based CorInnova is a member of JLABS at the Texas Medical Center.
Crossdeck
**Harvard University | 2016 Competitor | [www.crossdeck.us](http://www.crossdeck.us)**

Crossdeck builds software and offers services that enable distributed workforces to take advantage of mobile-first technology to enhance daily operations in areas like training, maintenance, inspections and assessments. The software can be effectively deployed in a range of industries, from the U.S. military to state and municipal governments, to regulated industries like construction.

Their mobile-first platform and applications empower distributed teams, from executives to rank and file, with a suite of productivity applications that boost readiness, streamline processes and unlock actionable data. Users can quickly access workflow tools that augment training, logistics, maintenance, administration and communications, integrating disparate systems into one unified work stream.

Crossdeck is headquartered in Washington, D.C.

CrowdTunes
**Duke University | 2014 Competitor | [www.crowdtunes.com](http://www.crowdtunes.com)**

Based in Durham, North Carolina, CrowdTunes is an interactive commercial music service that allows restaurant and bar patrons to choose the establishment’s music by bidding on the music they want to hear. They provide a turnkey, legal music solution for venues. Their service can be setup in less than five minutes. The company improves the establishment’s bottom line through increased sales to a more engaged customer.

The company is a combination of three separate products: background music, mobile jukebox and marketplace for music. The venue owner will be able to select a catered playlist from millions of songs that plays without interruption. Patrons will be able to choose and play new songs within the owners’ playlist. Songs will play in the order they were added, and during high volume periods, patrons can engage in competitive bidding to move their songs to the top of the queue.

FORTUNE recently listed CrowdTunes as one of the five Tech Startups to Watch in Durham, North Carolina. The company was a NC IDEA Winner in 2014.

CryoPop Project
**Formerly MoMo Scientific | Developed at Jhpiego | Johns Hopkins University | 2012 Competitor | [www.jhpiego.org](http://www.jhpiego.org)**

Momo Scientific developed a medical device to prevent cervical cancer. The patent-pending CryoPop uses dry ice to treat precancerous, cervical lesions in women living in developing countries. Routine tests such as pap smears are often financially out of reach for many women in the developing world.

The device can be used by mid-level healthcare providers and is appropriate for use for a single visit approach to cancer screening. Using simple, locally available supplies, the CryoPop is a fraction of the current devices.

The technology was featured on National Public Radio, Medical Device & Diagnostic Industry Magazine and Medgadget.com. The device was named the Best Medical Device 2012 at the NCIIA BMEIdea Competition. Since participating in the 2012 Rice Business Plan Competition as a social venture, the team developing the CryoPop has been within the innovations group of Jhpiego.

Jhpiego is a nongovernment organization affiliated with The Johns Hopkins University developing strategies to help countries care for themselves by training competent health care workers, strengthening health systems and improving delivery of care. Jhpiego will be looking to license the technology to a true medical device company.
CurvyQ
Formerly PalpAid Technologies | Carnegie Mellon University | 2016 Competitor | http://curvyq.com

CurvyQ is developing a medical device to facilitate quantitative physical breast exams to prevent unnecessary tests, promote screening when necessary and use data-driven approaches to improve our understanding of breast disease.

Their simple, low-cost device is called the PalpAid. The PalpAid is novel combination of soft tissue mechanics and computer vision techniques to make breast exams quantitative. In vitro test results of the PalpAid improved the precision of physical breast examination by 80 percent.

CurvyQ is part of the National Science Foundation I-Corps program.

cycleWood Solutions
Formerly cycleWood Plastics | University of Arkansas | 2011 Competitor | www.cyclewood.com

Using their patented technology, cycleWood Solutions modifies lignin, an abundant, natural byproduct of the paper manufacturing process, and blends it with other compostable polymers to create our product, the Xylobag™. The bag breaks down into humus in approximately 180 days once it has reached the natural environment, improving soil structure and leaving a cleaner environment. The Xylobag provides retailers with a viable, cheap bag alternative and allows consumers to eliminate unsightly plastic litter from their communities.

Their Xylomer™ pellets are a proprietary blend of polymers and additives to produce a 100 percent biodegradable and compostable thermoplastic. To date, cycleWood has produced single-use plastic bags, trashcan liners, and meat bags on commercial blown extrusion lines. Additionally, they have used the Xylomer pellets in injection molding and vacuum forming processes to create samples of cups and bowls.

In 2016, the U.S. Patent Office awarded cycleWood Solutions a patent for chemical modification of lignin and its derivatives. The company received a Small Business Innovation Research Phase II grant from the National Science Foundation in 2014. Press coverage includes Harvard Business Review Today, Reuters, FORTUNE and Ecopreneurist. They placed fourth in the 2011 Rice Business Plan Competition and won the bronze in the 2012 Edison Awards for the safety and sustainability category. Headquartered in Dallas, cycleWood has an additional office in Fayetteville, Arkansas.

Cytex Therapeutics
Duke University | 2006 Competitor | http://cytextherapeutics.com

Cytex Therapeutics is developing tissue-engineering strategies designed to treat cartilage injury and pathologies. Their implants are made from three-dimensional woven textiles engineered to generate cartilage that can be used to treat cartilage degeneration in the hip and knee. Cytex' design allows their implants to mimic cartilage properties immediately upon implantation while promoting a long-term healing response that regenerates native tissues.

In its July 18, 2016 edition, the journal Proceedings of the National Academy of Sciences reported Cytex had developed workable, artificial cartilage. The man-made cartilage is intended for individuals younger than 50 years old, whose cartilage has degenerated due to arthritis. Cytex will begin animal testing soon with expected market availability in five to 10 years.

Cytex has received Small Business Innovation Research grants through National Institutes of Health to study the effects of biochemical cross-linking and disease-modifying compounds. Additional funding and support has been provided by the North Carolina Biotechnology Center, the National Science Foundation, and NC IDEA and by the Duke StartUp Challenge. Cytex is headquartered in Durham, North Carolina.
D-Orbit
Santa Clara University | 2010 Competitor | www.deorbitaldevices.com

D-Orbit is active in designing, manufacturing and selling active commissioning and decommissioning systems for satellites and offers launch services for small satellites. Based on proprietary solid-propellant technology, D-Orbit’s independent commissioning and decommissioning systems streamline the initial and the final phases of the mission, reducing system complexity and cost of operations and increasing lifetime, reliability and revenues. Key Customers include the European Space Agency and Airbus DS.

The company’s D-Sat satellite, entirely designed and manufactured at the D-Orbit premises, will be launched in the second quarter of 2017. It is the first satellite with a fully functional, independent decommissioning system.

Recipients of numerous awards, recent honors include winning B-Corp’s Best for the World 2016 and the 2016 Most Innovative Startup at Premio Italiano Meccatronica. They have been featured in various articles and interviews in the Italian newspapers as well as in WIRED, The Japan Times and Space Safety Magazine. Based in Milan, Italy, the company has additional offices in Falls Church, Virginia and Lisbon, Portugal.

D&P Bioinnovations
Tulane University | 2016 Competitor | www.dpbioinnovations.com

D&P Bioinnovations is a regenerative medicine company focused on repairing damaged organs with unique biomaterials and immunomodulatory stem cell factors. They have developed a novel, off-the-shelf™ implant to regenerate damaged organs. The company’s first therapeutic approach is to regenerate a damaged esophagus to treat esophageal cancer.

The D&P team spent two weeks during the summer of 2016 in the India Immersion Program sponsored by the Centre for Cellular and Molecular Platforms (C-CAMP) and the California Institute for Quantitative Biosciences (QB3). They were a MassChallenge finalist and won the Greenburg Traurig Award at Mass Innovations.

DaStrong
Formerly EcoBreeze | National Taiwan University, Taiwan | 2014 Competitor | www.dastrong.com

DaStrong Corp. stands to revolutionize the electronic cooling industry. They provide an electromagnetic force-driven, bearing-free and oscillating blade-cooling module.

By feeding the module with alternating electric signals, the actuator will generate interchanging electromagnetic forces that push the blades to vibrate at the designated frequency. The vibration will then deliver strong cooling airflow. Compared to competitors’ offerings, the DaStrong module has multiple competitive advantages, including lower cost, lower power consumption, higher reliability, higher adaptability and a longer life span.

With their core patents granted in China, Taiwan and the United States, DaStrong is in production, providing thermal solutions to world-leading companies. DaStrong offices in the Innovation Center of the Buffalo Niagara Medical Center and is part of START-UP NY.
Datafiniti
Formerly 80legs | Rice University | 2009 Competitor | www.datafiniti.co

Datafiniti provides instant access to web data. The company compiles and indexes product, business and property data from the entire Internet, and using their proprietary technology, transforms it into a single database so businesses can access the web data they need. Data that can be used for a wide variety of business applications like lead generation, pricing intelligence and competitive analysis.

Datafiniti’s exhaustive yet scalable data collection and quality control process provides customers with industry-leading coverage and accuracy. They help business take the next step in developing data-driven applications and conducting insightful market research.

Headquartered in Austin, Texas, the company was a finalist at the 2009 Rice Business Plan Competition.

Datavis Tech
University of Arkansas | 2014 Competitor | www.datavistech.com

Datavis Tech offers consulting services for design and development of interactive data visualizations for the web. They also help with the supporting work, including user interfaces, data processing and full-stack development. The company specializes in creative, collaborative projects in which data is visualized for the web using D3.js and other Open Source technologies. Given a data set or API (application program interface) to work with, Datavis Tech helps clients explore and present the data visually.

Datavis is headquartered in the retail epicenter of the world, Northwest Arkansas. They have built an experienced team of partners and a network of individuals that help elevate small and mid-tier suppliers to new heights in the retail industry.

DATTUS
Formerly Bearing Analytics | Purdue University | 2013 Competitor | www.dattus.com

DATTUS provides a platform (hardware + software) to make industrial machinery “smarter” and helps industrial facilities compete in the rapidly evolving industrial environment through data-driven intelligent decision making.

Their hardware gathers data on a wide range of parameters (e.g. temperature, vibration, cycle counts), and their software translates this data into actionable insights through packaged analytics algorithms. The turnkey platform solution provides a seamless path for industries to add “smart” to their operations — enabling value delivery across maintenance and reliability; operational efficiencies, process, and quality management; manufacturing yield and throughput; environmental health and safety, and in the case of machinery OEMs, also post-sale support and warranties. DATTUS’ customers include Faurecia and Wabash National.

As a national finalist at the 2013 Department of Energy Clean Energy Challenge, DATTUS was awarded grants from Founder.org and the U.S. Department of Energy. The company receives additional support from the Purdue Foundry, an entrepreneurial hub based in the Burton D. Morgan Center for Entrepreneurship. They were finalists at the 2016 Clean Energy Challenge (Early Stage) and have been nominated for the 2016 MIRA Award for Tech Product of the Year. Headquartered in Indianapolis, Indiana, DATTUS was selected for the Gener8tor accelerator in Wisconsin.
DDMotion
Formerly Differential Dynamics | Columbia University | 2005 Competitor | www.ddmotion.com

Headquartered in suburban Baltimore, Md., DDMotion consists of a team of engineers dedicated to harnessing clean energy from the immense power of rivers. Using their mechanical, infinitely-variable motion-control devices, they have created the first scalable water turbine that uses a speed converter assembly to change variable water flow into constant frequency, grid-compatible electricity. Unlike wind and solar energies, rivers flow continuously, delivering an abundant yield.

The company holds an array of patents on its innovative variable motion controls. DDMotion is supported in part by the Maryland Industrial Partnerships Program and the Maryland Technology Development Corporation.

DexMat
Rice University | 2015 Competitor | http://dexmat.com

DexMat manufactures high-performance carbon nanotube (CNT) fibers and coatings using a proprietary solution processing technology. They intend to supplant heavy, rigid metals in cables used in the aerospace, wearable electronics and medical device markets. Metal cables weigh down aircraft and are prone to fatigue failure in electronics. Lightweight, flexible cables made with DexMat materials are up to 40 percent lighter, 10 times stronger and have 25 times higher flexural tolerance than metal cables.

Forbes named co-founders Dmitri Tsentalovich and Francesca Mirri to their 2016 list of 30 Under 30 in Manufacturing and Industry.

DexMat finished off 2016 with a Small Business Innovation Research Phase II grant from the U.S. Air Force and a pilot-scale coating line for commercial-grade aerospace cables. Slated for a future spot in the U.S. National Laboratory, DexMat’s CNT cables will be tested under the extreme conditions on board the International Space Station. The company placed fifth overall in the 2015 RBPC.

Diagenetix
University of Hawai‘i | 2011 Competitor | http://diagenetix.com

Honolulu-based Diagenetix, Inc. develops mobile, accurate, gene-based (molecular) diagnostic technologies. By enabling diagnostics outside of a centralized lab, they help industries and people more quickly prevent or minimize the spread of harmful pathogens and diseases.

Improving upon the company’s original Smart-DART™ products, the BioRanger is a handheld biology lab, engineered to detect any gene marker. It is controlled by an Android app to facilitate record keeping and sharing of test results. Currently, the device is used by research communities, federal agencies and agricultural producers and processors for on-site detection of microbial contamination and diseases.

The company’s original DART technology was originally developed for the detection of select agricultural agents and funded by the United States Department of Agriculture. Their technology has caught the eyes of media outlets such as The Wall Street Journal, TechCrunch and AlleyWatch.

In January 2017, the company’s Smart-DART Platform for portable molecular diagnostic screening was acquired by Douglas Scientific. Diagenetix will continue to develop and commercialize the platform.
**Disease Diagnostic Group**  
*Case Western Reserve University | 2013 Competitor | www.diseasediagnostic.com*

Disease Diagnostic Group (DDG) is a medical device company specializing in screening, tracking and diagnosing highly infectious or neglected tropical diseases through portable and reusable devices. Its flagship product is RAM (Rapid Assessment of Malaria).

DDG was founded in 2012 to create products that address the most pressing challenges in global health. These problems include not only better diagnosis of disease but also the communication of data throughout the health care system. The diverse team of engineers, scientists, physicians and global health experts is uniquely dedicated to making high-performance products specifically designed for resource-poor markets.

The RAM device has been tested in clinical trials in India, and DDG has begun selling small quantities to Indian doctors and healthcare workers handling field tests for malaria. An early study showed a 93 to 97 percent accuracy rate of the RAM. DDG will launch their next field study in the summer of 2017. It will include up to 5,000 Nigerian patients.

With offices in Boston, Massachusetts, Buffalo, New York and London, England, DDG is the recipient of numerous grants and awards including Launch NY, the MIT $100K Pitch Competition and the Harvard Life Science Accelerator. They have been featured in media outlets including CNN Money, The Boston Globe, The New York Times and The Plain Dealer. Founder John Lewandowski was named to Forbes’ list of 30 Under 30 in the social entrepreneur category in January 2017.

**Divert**  
*Formerly FEED Resource Recovery | Babson College | 2007 Competitor | www.divertinc.com*

Divert creates innovative and efficient solutions toward eliminating waste from the retail industry. They helping retail supply chains realize a smaller cost (or see a greater return) on resource recovery efforts, from trackable food waste bins to organics backhauling; from energy generation to innovative solutions for untapped opportunities like waxed cardboard.

Through innovative technology and custom-designed solutions, Divert brings accountability to retail recycling operations worldwide. Their flexible tools integrate seamlessly into existing workflows, helping customers exceed diversion goals, report on individual store performance and save money, all while making a real, lasting environmental impact.

The company’s first completed project was a clean energy production system for Kroger’s Compton, California, distribution facility. The Kroger system is designed and operated by Divert and leverages Kroger’s existing distribution network to generate clean, sustainable power for onsite operations, reduce emissions and save millions of dollars on waste removal costs. The Divert system processes over 300,000 pounds of organic waste material every day, offsetting the facility’s energy by over 20 percent. Additionally, the technology eliminates half a million miles of diesel truck miles annually and provides Kroger with an 18.5 percent return on investment.

Featured in the Los Angeles Times and Biocycle, Divert is based in Concord, Massachusetts.
DMF Medical
Formerly Purisorb | Dalhousie University | 2011 Competitor | www.dmfmedical.com

DMF Medical Incorporated has developed a revolutionary carbon dioxide filter for anaesthetic circuits. It uses a mechanical, membrane-based device rather than chemicals to remove CO₂. This approach prevents toxins from being creation produced when anaesthetic vapors react with traditional CO₂ absorption materials. The company’s device is fully compatible with all existing anesthesia equipment and eliminates needing to dispose of contaminated and hazardous absorption materials. As a result, DMF’s product allows for a safer and less expensive delivery of anesthesia for patients and operating room staff.

In July 2016, DMF Medical announced they ready to launch. Currently in the midst of the regulatory process in Canada and the European Union, the company is planning a 2017 release of their signature product, Memisorb.

DMF’s funding comes in part from the Atlantic Innovation Fund. They are headquartered in Halifax, Nova Scotia.

Driven Analytics
University of Oklahoma | 2015 Competitor | www.DrivenAnalytics.com

Driven Analytics, Inc. provides new car dealerships with a customer retention platform designed to establish a long term relationship with customers built on objective data and trust, delivered via a delightful mobile app.

Their Maintain™ app helps car owners understand their maintenance needs and educates them on dealership pricing. In app appointment scheduling makes returning to the dealer simple and integrated dealership rewards provide great incentives.

In 2016, Driven Analytics closed a bridge round and is starting to put together a Series A funding round. They were runner-ups for the 2016 Oklahoma Venture Forum’s Most Promising New Venture Award and were named one of the hottest start-up in the world by CNBC in 2014. They company is in the midst of finalizing a major distribution deal. Driven Analytics is headquartered in Edmond, Oklahoma.

Dynamics
Carnegie Mellon University | 2009 Competitor | www.dynamicsinc.com

Dynamics Inc. produces and manufactures intelligent powered payment cards and advanced payment platforms. Focused on introducing fast-cycle innovation to top card issuers, the company’s first commercial application is the world’s first fully card-programmable magnetic stripe for use in next-generation payment cards. Dynamics went on to produce the first fully card-programmable EMV and contactless technology.

The company has won many of the world’s most prestigious international business plan competitions including the Rice Business Plan Competition, Carnegie Mellon McGinnis Venture Competition and the University of San Francisco Business Plan Competition.

The company won DEMOgod and the $1M People’s Choice Award at DEMO Fall 2010, Best of Show at FinovateFall (2010, 2011 and 2012), Best of Show at Cartes 2011 and Best of Show at BAI Retail Delivery 2011. Dynamics won Best in Show for Personal Electronics and Technology Honors at the 2012 International Consumer Electronics Show. Founded in 2007, Dynamics is headquartered in Pittsburgh, Pennsylvania.
Dynamo Micropower  
Duke University | 2012 Competitor | www.dynamo-micropower.com

Based in Somerville Massachusetts, Dynamo Micropower is a producer of small gas turbine engines. Dynamo sells engines, associated control systems and applications engineering to original equipment manufacturer partners that build reliable, fuel-flexible heat and power solutions. Dynamo Micropower gas turbine engines compete favorably with diesel engines in many applications.

After successful field trials, the company received a large order for its TurboCore engines from Multitek North America. Dynamo Micropower installed their first PowerCore electric generating turbine system in the fourth quarter of 2015 and released their 1.5 million BTU/hour TurboCore engine in 2016.

Micropower is funded by a Small Business Innovation Research grant from the National Science Foundation and by the U.S. Department of Energy.

EcoHarvester  
Formerly E&M Devices | University of California, Berkeley | 2009 Competitor

EcoHarvester is a green technology startup company that designs and builds consumer electronics devices powered by users’ own energy, not batteries. The company combines Bay Area technological innovation with Japanese-inspired aesthetics to create elegant, energy efficient products.

The company has two U.S. patents granted and is backed by both private investors and multiphase Small Business Innovation Research grants from the National Science Foundation. EcoHarvester won the 2009 NASA Earth/Space Engineering Innovation prize at the Rice Business Plan Competition. Founded in 2008, EcoHarvester is based in Berkeley, California.

EcoLight  
Formerly Cirquility/House | Dartmouth College | 2012 Competitor

EcoLight installed and managed energy efficient systems for residential and commercial businesses. In partnership with Dartmouth College, EcoLight installed energy efficient systems in the Thayer School of Engineering. After competing in the 2012 Rice Business Plan Competition as House Inc., the founders reorganized, first as Cirquility, then as EcoLight.

In April 2013, EcoLight’s founder sold the company. It is still operating under the same name in New Hampshire.
EEme
Carnegie Mellon University | 2013 Competitor | www.energyefficiency.me

EEme is an analytics-as-a-service spin out from Carnegie Mellon University. The company converts raw smart meter data into appliance/equipment-level energy insights using proprietary machine-learning algorithms. This technology is a cost efficient alternative to installing expensive plug level hardware to monitor energy use or the time consuming physical building audits done by professionals.

Following initial pilots, the company released a third party validation study with Pecan Street. The study encompassed 270 homes over 12 months and was covered by Greentech Media, generating significant interest in EEme’s technology in both the U.S. and abroad.

Currently, they are continuing their deployments with a Texas-based energy retailer, a third party EE (energy efficiency) program evaluator, a smart meter technology vendor, a Denmark-based energy retailer, the U.S. Department of Defense and a Chinese demand response provider. EEme’s partnership pipeline consists of home energy management incumbents and smart meter technology vendors who would like to take their solutions to tens of millions of buildings. Headquarters for EEme are in Pittsburgh, Pennsylvania.

EGG-energy
Formerly Sulico | London Business School | 2011 Competitor | http://egg-energy.com

EGG-energy is working at the crossroads of solar energy and financial inclusion to make efficient, high-quality sustainable energy solutions available to off-grid Tanzanians. EGG has developed sales and marketing techniques, management systems, a distribution network, and a financing program—all coordinated by an innovative IT system—to efficiently deliver rent-to-own solar energy to customers living off the grid. We focus on the areas of the value chain where energy technology companies are struggling the most and require on-the-ground operational capacity.

They are supported in part by the U.S. Agency for International Development, GDF SUEZ, National Geographic and Power Africa, a U.S. government initiative addressing the lack of access to electrical power in sub-Saharan Africa. EGG-energy is based in Dar es Salaam, Tanzania.

Elegus Technologies
University of Michigan, Ann Arbor | 2015 Competitor | www.elegustech.com

Elegus Technologies Elegus Technologies is commercializing nanotechnology for lithium batteries using Kevlar-derived separator material. The company was founded in 2014 as a promising spinout from the University of Michigan Master of Entrepreneurship program, a joint program between the Ross School of Business and College of Engineering.

With significant support from the likes of the University of Michigan, MEDC and the National Science Foundation I-Corps program, Elegus has continued to develop its patent-pending battery separator technology. In 2015, Elegus was also included in the inaugural cohort of Techstars Mobility in Detroit, a prestigious global startup accelerator program with less than a 1 percent acceptance rate.

To further improvements on their advanced battery separator, Elegus is partnering with two Michigan manufacturers. Currently in the final stages of product development, Elegus anticipates a market launch in two years. The company headquarters in Ann Arbor, Michigan.
Elevate K-12
Formerly Elevate Learning | University of Michigan | 2007 Competitor | www.elevatork12.com

Elevate K-12 offers intervention solutions to schools for all grade levels and all content areas. The company’s goal is for every student to get one-on-one, online instructional support, irrespective of geography, demography and ethnicity.

It works as a digital and virtual intervention school inside the school building. The school selects the academic goals and students to be targeted for the intervention. Elevate K-12 creates a customized online intervention course for the targeted students and assigns qualified online instructors to each student group. The instructors, their students and program implementation are digitally and virtually monitored. Analytics from these reviews periodically score improvement. Elevate K-12 runs and implements the program during or after school and on a set schedule.

Partnering with more than 5,000 instructors, Elevate K-12 has delivered over 5 million hours of instruction resulting in an average 35 percent increase in student’s test scores. The Chicago-based company is expanding nationally and globally.

essDOCS
Formerly Electronic Shipping Solutions & eShipping Solutions | University of Pennsylvania | 2004 Competitor | www.essdocs.com

Established in 2003, essDOCS provides legal binding electronic document services for international trade participants to better manage the documents required for operations, legal, compliance and customs purposes.

The company owns and operates the essDOCS eB/Ls (electronic bills of lading) exchange that guarantees instant delivery of legally effective, original, electronic trade and shipping documents. The documents offered include trading documents such as bills of lading, certificates of quality and cargo manifests; compliance documents such as safety data sheets; and customs documents such as electronic administrative documents. The essDOCS platform replaces the current paper flow, eliminating cost and risk.

In recent years, essDOCS’ network has grown significantly. Their more than 18,000 customers are active in 168 nations. EssDOCS’ customer base is comprised of leading oil companies, commodities traders, trade finance banks, ship operators, surveyors and shipping agents. It includes companies like Shell, Bank of America and Total. In November 2016, they launched an electronic tracking system that will combat fraud in warehouses.

The company is headquartered in Valetta, Malta, with ten offices around the globe: London, Singapore, New York, Athens, Amsterdam, Adelaide, Shanghai, Tokyo and Taipei.
Essentium Materials
Formerly Natural Composites & Whole Tree | Baylor University | 2010 Competitor | http://essentiummaterials.com

Essentium is commercializing the world’s first energy-responsive filament for Material Extrusion 3D printing and developing revolutionary in-situ polymer welding capabilities. This technology provides dramatic improvements in space, weight and power requirements for automotive, aerospace, military vehicles, wearables and human-interacting components. It has many battlefield device applications.

Essentium’s work is supported by grants from the National Science Foundation through its Small Business Innovation Research program.

In May 2016, Essentium acquired Trifusion, winner of the 2016 RBPC. In the months since, the company has signed memoranda of support with Exothermix to foster Essentium’s development and international expansion. Essentium is based in College Station, Texas.

EternoGen Aesthetics
University of Missouri | 2011 Competitor | www.ternogen.com

EternoGen Aesthetics is a clinical stage medical device company that has developed a transformative pipeline of first-in-class liquid collagen tissue products to restore lost dermal tissue.

The company’s platform Rapid Polymerizing Collagen (RPC) is pure collagen that naturally integrates with the dermis and forms a contour stable matrix within minutes of injection. RPC’s integral chelating agent binds calcium ions, inhibiting collagenase activity. It is designed to last beyond 12 months.

As new residents of the M2D2 incubator (Massachusetts Medical Device Development Center), they have easy access to Berkshire Sterile Manufacturing, their contract manufacturer. EternoGen intends a European launch of their bio-dermal restoration product Cellifique in 2017. EternoGen operates in Columbia, Missouri and Stockholm, Sweden.

Eventigrate
The Katholieke Universiteit Leuven, Belgium | 2016 Competitor | www.eventigrate.com

Eventigrate is a multi-event solution bringing context- and location-based information to every stakeholder of an event. Real-time and post-event analytics offer relevant insights enabling the event organizer to optimize his event, exhibitors to generate new leads for their company and attendees to network more efficiently.

Since competing in the 2016 RBPC, Eventigrate has been nominated as Student Startup of the Year and competed in the finals of Bizidee. They are headquartered in Heverlee, Belgium.

EximChain
Massachusetts Institute of Technology | 2016 Competitor | http://eximchain.com

Eximchain is a platform for trade and sales ratings based on transaction history. The company provides contracting tools for interested parties and helps them improve their reputation by storing contract and proof of performance in a Bitcoin blockchain.

Eximchain builds international trade credit scores for small to medium sized (SMEs) importers and exporters. Trust is built by transaction history and is key to global trade. However, SMEs lack a system that is widely accepted, globally adopted and recognized as independent.

Although Eximchain has yet to launch, the company was recently featured in an article in The Forum FinFuture.
Flat Medical
National Taiwan University, Taiwan | 2016 Competitor | www.flatmedical.com

Flat Medical, established in May 2015, is designing innovative medical devices to prevent the accidental punctures during different kinds of injections. With their auto-locate and anti-puncture technology, they can reduce the high risks and costs related to serious side effects without a change of doctor’s habit.

The company’s first product, EpiFaith, has gone through the first pilot and is being used in an in vivo study. The core patent of EpiFaith was granted in Taiwan in October 2016 and is now pending in the U.S. and China. Having received grant funding from the National Taiwan University Hospital, Flat Medical is preparing for a small-scale clinical trial. The team hopes for a fourth quarter 2017 launch.

The company’s second product in the pipeline is still in the research and development phase. The first version of the prototype for proof of concept validation has been built.

Fluency Lighting Technologies
University of California, Santa Barbara | 2015 Competitor | www.fluencylighting.com

Fluency Lighting Technologies, Inc. is creating next generation, energy-efficient lighting technologies for high-power, high-brightness industrial light sources.

Through materials design, they focus on improving energy efficiency, using environmentally safe materials, creating high color quality light resembling natural sunlight with color tuneability based on application and lowering maintenance and replacement costs while creating a safer work environment reducing worksite accidents.

Fluency’s core technology lies within their patented laser-stimulated phosphor technology. Similar to low-power energy efficient light-emitting diodes, they instead use an alternative light source — a laser diode. Lasers are brighter, delivering more light using less energy. This approach allows for the creation of high-power solid-state lighting devices, enabling flexible design strategies and enhancing the availability of energy efficient light sources in the industrial lighting sector.

The company was founded based on innovations developed at the University of California, Santa Barbara in energy-efficient illumination.

Fluid-Screen
Yale University | 2015 Competitor | www.fluid-screen.com

A spinout of Yale’s Reed Lab, Fluid-Screen has developed a revolutionary bacterial detection system for quality assurance testing for municipal water supplies, medical applications and food processing. Fluid-Screen’s patent-pending, portable device produces test results in about 30 minutes with over 99 percent accuracy.

In the midst of its research phase, Fluid-Screen has three current pilots: two at major pharmaceutical companies with the third focusing on environmental applications. This last pilot uses grant funding from the Massachusetts Clean Energy Center to test water at beaches, lake and rivers to determine whether they are safe for recreation.

The company has received accolades from NASA and won the Grand Prize in NASA’s Create the Future Design Contest, a Gold Award from the MassChallenge Accelerator and the M2D2 Becton Dickinson Award. Fluid-Screen is based in Cambridge, Massachusetts.
**FocalCast**  
**Marquette University | 2014 Competitor | www.focalcastapp.com**

FocalCast is a leading unified communications platform that allows users to initiate unlimited collaboration on documents, whiteboards, live annotation and recordings.

The company’s web-based platform enables seamless collaboration across all types of internet-connected devices including smart phones, laptops, tablets, touch displays and PCs without downloads or plugins. FocalCast can be accessed from any device and run securely as an on-premise installation.

In February 2017, Focalcast began to partner with Qumu, to add real-time collaboration to Qumu’s recording and streaming services. Alumni of the Capital Innovators Accelerator program, the company received the 2016 Arch grant. In 2016 FocalCast was issued its first patent, closed a seed round, launched their flagship cloud collaboration platform, hired their first full-time employees and built integrations with both private and public enterprise communications companies.

FocalCast is used in corporations and higher-education institutions across the United States with headquarters in St. Louis, Missouri.

**Fruitdee**  
**Formerly AGcerez | Chulalongkorn University, Thailand | 2013 Competitor | www.fruitdee.com**

Fruitdee manufactures processed, organic longan. Longan is a fruit with a unique prebiotic component that aids in overall digestive health. The Bangkok-based company produces L’amai® prebiotic syrup, puree, juice and golden dried longan berries from certified organic farms in the northern part of Thailand. Their supply chain embraces a zero discharge philosophy, leaving no waste in the environment.

The company recently made changes in their product line to increase production of more of their basic products such as tropical juice. They supply one of the largest food conglomerates in Thailand and plan for a new product launch in March 2017.

**Gecko Robotics**  
**Carnegie Mellon University | 2016 Competitor | www.geckorobotics.com**

Gecko Robotics performs robotic inspections for energy and cogeneration plants across the United States. They build and operate robots to perform inspections on industrial equipment, specifically coal, biomass, natural gas and recovery boilers as well as storage tanks and piping.

Gecko’s robots eliminate dangerous working conditions by removing humans from confined and inaccessible places. Inspections are completed in a fraction of the time and cost compared with traditional methods. Inspected areas are evaluated in real-time with best practice inspection methods such as ultrasound, magnetic induction and visual, enabling plant managers to quickly know where and how to make targeted repairs.

The Pittsburgh-based company recently designed new sensing capabilities to detect the integrity of coatings with magnetic induction.

In 2016, Gecko provided robotic services across five states. One of the top seven startups from Y Combinator’s Winter ’16 Demo Day, they are funded by Y Combinator and other notable investors including two strategic industrial companies. Gecko Robotics placed third at the 2016 RBPC.
**gel-e Life Sciences**  
Formerly Remedium Technologies | University of Maryland | 2008 Competitor | www.gel-e.co

gel-e Life Sciences has developed an advanced wound care platform that can be used across a broad spectrum of clinical and non-clinical settings. By making molecular modifications to natural biopolymers, gel-e’s patented approach provides rapid hemostasis in a clean, safe healing environment.

The inert, abundant, naturally harvested components that constitute gel-e’s product line provide for low-cost manufacturing and distribution. Their technology platform is also extremely functional through use of Clean-Up gel-e™, a simple, innovative de-clotting agent designed specifically to reverse the strong bonds created by gel-e after the clot has formed.

gel-e Life Sciences works under grants from the National Science Foundation and the United States Army Research Lab. Additional funding comes from Maryland Industrial Partnerships program, the Maryland Biotechnology Center and TEDCO.

The company recently published their sixth peer-reviewed article, was issued their fifth U.S. patent and received a supplemental Small Business Innovation Research Phase II funding from the National Science Foundation. Their first product, Vascular gel-e™ for vascular access procedures was approved by the U.S. Food and Drug Administration.

**GestVision**  
Yale University | 2014 Competitor | www.gestvision.com

GestVision is a biotech company with a focus on maternal health addressing unmet needs. They are beginning with a novel diagnostic for preeclampsia, a life-threatening complication of pregnancy.

GestVision licensed their technology and published the discovery in the July 2014 edition of Science Translational Medicine. The company completed a clinical study at Ohio State University and is developing their diagnostic test for the United States. A grant from the U.S. Agency for International Development will make GestVision’s diagnostic available for testing in low resource communities such as Bangladesh and Mexico City.

Most recently, GestVision was the recipient of a Patents For Humanity Award from the U.S. Patent and Trademark Office. They are in the midst of a funding raise. GestVision is based in Groton, Connecticut.

**Global Cell Solutions**  
University of Virginia | 2004 Competitor | www.globalcellsolutions.com

Global Cell Solutions (GCS), headquartered in Charlottesville, Virginia, is focused on the application of a novel and dramatically improved patent-pending cell culturing technique. GCS is positioned to be an integral partner to the next generation of scientific breakthroughs in medicine, research, biotechnology, pharmaceuticals, and the emerging field of orthobiologics.

Partnering with the Medical Automation Research Center at the University of Virginia’s School of Medicine, GCS was awarded a Small Business Technology Transfer Phase I grant from the National Cancer Institute at the National Institutes of Health. This grant supports the research and development efforts for the development and production their microcarriers and automation platforms for various cell culture applications.

Global Cell’s technology is already establishing itself as an indispensable tool for improving research efficiency through higher cell quality and production by employing the latest in three-dimensional biology paradigms. They are currently in discussions with industry partners concerning potential licensing of their cell culture solution as well as collaborative research agreements.
Grow Bioplastics
The University of Tennessee | 2016 Competitor | www.growbioplastics.co

Grow Bioplastics is developing a family of bio-based, biodegradable materials from a forestry and agricultural waste product. They replace oil-based plastics in agriculture with their biodegradable materials made from biofuel and paper mill waste. Grow Bioplastics’ materials will initially be launched in farming applications.

Grow Bioplastics has won a number of awards, including the Audience Choice award at SXSWeco in Austin, and the team was invited to present at SXSW. They were a top four finalist in the American Farm Bureau Rural Entrepreneurship Challenge. Additionally, the company has been involved with the TENN Startup Accelerator, iCatalyst and the Megawatt Venture Challenge Accelerator. They were also part of the 2016 National Science Foundation i-Corps program. The bootstrapped company is headquartered in Lenoir City, Tennessee.

Hazel Technologies
Northwestern University | 2016 Competitor | www.hazeltechnologies.com

Hazel Technologies Inc. is a food waste prevention company based in Chicago, Illinois. Growers and shippers of produce use Hazel’s containers to extend the shelf life of fruits and vegetables, reducing spoilage, extending seasons and expanding geographic markets. FruitBrite™ is a carton insert that slows the ripening process of ethylene-sensitive produce, especially in tropical fruit and melons. Berrybrite™ is a berry flat insert that uses a blend of essential oils to increase the shelf life of berries by up to three times when kept cold.

Hazel has completed 12 successful pilots, deployed over 25,000 units across North America and just closed a seed round of funding. They are winners of the 2016 Illinois Clean Energy Fund Award.

Helix Steel
Formerly Polytorx & Torx International | Georgia Institute of Technology | 2003 Competitor | www.helixsteel.com

Polytorx LLC manufactures and sells Helix, a steel fiber additive used in varying dosages to reinforce construction concrete. It replaces rebar in concrete. Subjected to more than 10,000 tests both in laboratories and in the field, Helix has been proven to meet or exceed rebar performance in every application of concrete. Originally designed at the University of Michigan for applications in earthquake and blast resistance, Helix is now used in a broad spectrum of projects ranging from commercial to infrastructure, residential to heavy industrial, shotcrete to precast.

In February 2016, Helix Steel was chosen for New York City’s Metro Transit Authority’s East Side Access Project. Helix is reinforcing the tunnels that connect Long Island to Manhattan’s Grand Central Station. It is the biggest transportation project in the nation and the first expansion of the Long Island Rail Road in more than 100 years. The company has garnered major entrepreneurial awards, and it was featured on ABC’s Extreme Makeover: Home Edition. Helix was used to rebuild homes in Joplin, Missouri destroyed by the 2011 tornado. In the past year, the company has filed new patents and received ISO 9001-2015 accreditation.

Helix is manufactured in the United States but sold worldwide from offices in the United States, Canada, Mexico, Brazil, Australia and Singapore. Located in Ann Arbor, Michigan, the company operates two manufacturing facilities, using its own proprietary, high-speed machines for manufacturing.

Helix Steel was acquired by their leading investor, Pensmore Reinforcement Technologies in January 2017. RBPC alumnus and founder Luke Pinkerton will remain as President and CTO of Helix Steel.
Hemova Medical
Johns Hopkins University | 2011 Competitor | www.hemovamedical.com

Hemova Medical is a medical device company focusing on the needs of the renal community, pushing forward on tomorrow’s technologies, which will change the landscape of dialysis treatment and management. Their specific areas of focus are on vascular access creation, monitoring and surveillance and patient engagement.

The company has completed work on the vein interface of the device. They continue to develop the port interface, which is the superficial device used by the technician. They are still trying to establish acceptable long-term durability.

Hicor Technologies
Formerly OsComp Systems | Massachusetts Institute of Technology | 2010 Competitor | www.hicor.com

In 2013, OsComp Systems Inc. spun off its virtual pipeline business and rebranded in 2014 as Hicor Technologies. Hicor is commercializing a novel rotary multiphase compression technology that enables producers to simplify their wellhead footprint, reduce their field energy consumption, increase the production lifetime of their wells and comply with the highest environmental standards by eliminating well site emissions. The Hicor technology achieves a more efficient compression process by minimizing the temperature rise associated with compression. Hicor’s technology is 30 percent or more efficient than conventional compressors.

Funded by top-tier investors Energy Ventures and Chevron Technology Ventures, Hicor operates a world-class facility with generous lab space to develop its technology, grow its ideas, and build and test its compressors. The company’s headquarters and test facilities are located in the World Houston International Business Center.

Founder Pedro Santos was named to Forbes’ inaugural list of 30 Under 30 in Energy in 2011 and has been the recipient of numerous technical awards including the Goradia Innovation Prize.

OsComp Holdings LLC provides a unique end-to-end transportation solution for transporting natural gas with its virtual pipeline system, making it easy for customers to switch to natural gas as a primary energy source. OsComp has two facilities located in Houston and Boston.
Husk Power Systems  
University of Virginia | 2008 Competitor | www.huskpowersystems.com

Husk Power Systems (HPS) provides locally based (decentralized), low-cost mini-power plants and distribution solutions to electrify rural villages. The first HPS plant was established as an experiment in August 2007 in Tamkuha Village in Bihar, India. The plant lit up Tamkuha, which means “fog of darkness,” for the first time in its history. HPS was formally incorporated in 2008 and is based in Patna, India.

HPS uses a biomass gasification based proprietary electricity generation process, where it converts biomass waste such as rice husks into gas that powers a turbine to generate electricity. They distribute electricity directly to rural households and small businesses.

Since 2008, HPS has touched the lives of 200,000 people and saved over 9 million liters of kerosene, significantly reducing indoor air pollution and improving health conditions in rural areas. By extending village life beyond daylight hours, HPS promotes economic development by enabling businesses to stay open after dark and allowing children to study at night.

Husk has received funding from venture capital groups and from the International Finance Corporation, the private investment arm of the World Bank. The company won the 2011 Africa Enterprise Challenge Fund Award and the Ashden Award for Sustainable Energy. HPS continues to receive a great deal of positive attention from the media and has been featured in publications including The New York Times, the Daily Beast, the Voice of America, The Washington Post and PBS News Hour.

Hybridtronics  
University of Chicago | 2007 Competitor | www.hybridtronics.com

Hybridtronics is commercializing retrofit conversion kits so conventional fuel vehicles can be converted from petrol, diesel or CNG powered to hybrid, plug-in hybrid or full electric powered. The kit can potentially cut fuel consumption by over 50 percent in certain driving conditions or be used to boost the acceleration of almost any road vehicle.

The company is headquartered in New Delhi, India.

Hygia Sanitation  
Chulalongkorn University, Thailand | 2016 Competitor

Hygia Sanitation is a profit-oriented social enterprise that aims to improve sanitation for all, by harnessing proprietary and disruptive waste treatment technologies. The company’s sustainable business model provides a flexible franchise-operated and company-owned growth strategy that allows them to cater to the 3.5 billion people worldwide who lack adequate sanitary facilities, the majority of whom are situated in either remote rural communities or densely-populated urban slums.

Their immediate target markets are in South Asia and Africa, where inadequate sanitation causes significant public health issues, and where both governments and non-governmental organizations are aggressively looking for a sanitation solution.

In cooperation with Chulalongkorn University, the Hygia team is working on a pilot project to develop the septic tank. They are headquartered in Bangkok, Thailand.
RBPC Success Stories

Hylion
Carnegie Mellon University | 2015 Competitor | www.hylion.com

Hylion is developing an add-on hybrid system for the long-haul trucking market. Their product will reduce semi trailers total fuel consumption by over 30 percent. In addition, it will improve the driver’s quality of life as well as reduce harmful greenhouse gas emissions.

The biggest pain point in the trucking industry is fuel consumption, with nearly 40 percent of operating costs going toward fuel alone. Hylion’s SMART Suspension System uses regenerative braking to capture power when the vehicle is slowing down or going down hill and reuses it to accelerate. It adds power and technology to the trailer, which is traditionally a passive system. It can give power to the truck while it is parked in a rest area so that the driver can turn his diesel motor off, save over 13 percent in fuel and finally get a good night sleep. Their system will also offer stability control, reducing the number of accidents caused by jack-knifing and rollovers by over 50 percent. Lastly, Hylion gathers data while the vehicle is driving down the road and lets their customers see the information through an easy-to-use, web-based platform.

Headquartered in Pittsburgh, Pennsylvania, Hylion won the 2016 Create the Future Design Contest. They were also winners of the U.S. Department of Energy’s 2015 National Clean Energy Business Plan Competition and placed third in the 2015 Rice Business Plan Competition.

Illusense
Formerly AME (Agile Monitoring Equipment) | The University of British Columbia, Canada | 2013 Competitor | www.illusense.com

Illusense Inc is developing leak detection and prevention technology to mitigate the environmental damage and heavy costs caused by oil pipeline leaks.

Their ultra-high resolution, laser-based, internal oil and gas pipeline inspection technology enhances integrity management by proactively prioritizing pipeline maintenance. The resulting 3D data sets allow pipeline operators to capitalize on unprecedented intelligence, enhance the understanding of the condition of their assets and deliver on their zero-leak goals.

Illusense was a finalist for the EVOK Innovation Cleantech Pitch Session at GLOBE 2016 and recently secured funding from Sustainable Development Technologies Canada (SDTC). The company is headquartered in Richmond, British Columbia.
ilumi solutions
Formerly ilumi Lighting Solutions | The University of Texas at Dallas | 2011 Competitor | http://ilumi.co

ilumi solutions provides intelligent, simple and innovative wirelessly controlled light-emitting diode (LED) lighting solutions.

After early funding raises on Indiegogo and Kickstarter, the ilumi team took their Smartbulbs to ABC’s Shark Tank in the spring of 2014, earning the backing of Mark Cuban. The company holds six patents and continues to broaden their product base, including an outdoor bulb and lighting strips. ilumi’s light bulbs last up to 20 years and are five times more energy efficient than regular bulbs.

At CES 2017 (Consumer Electronics Show) in Las Vegas, ilumi unveiled their Bluetooth MeshTek Internet of Things network that integrates home audio, video, lighting products and security systems. Their technology connects the MeshTek to WiFi, and an app operates up to 50 devices within a 400 foot Bluetooth range. ilumi won the 2016 CES Bluetooth (Breakthrough Product Winner) Award and is one of Entrepreneur’s 100 Brilliant Companies.

ilumi’s patent-protected, wireless lighting control system has been featured in TechCrunch, CNET and Forbes. Ilumi is based in Dallas, Texas.

ImagineOptix
The University of North Carolina at Chapel Hill | 2007 Competitor | www.imagineoptix.com

ImagineOptix creates innovative solutions for optical and opto-electronics challenges in displays, telecommunications, imaging, optical storage and spectroscopy. In collaboration with organizations across a wide range of industries, ImagineOptix applies proprietary technologies to control and capitalize on the properties of light in unexpected ways, resulting in dramatic improvements to optical efficiency and performance.

Its patented thin-film wavefront and spectrum control technologies have been successfully applied to imaging systems, telecom switches and liquid crystal displays. They have enabled the world’s smallest, most battery-efficient projectors.

Since signing its first major development contract in 2012, the company has grown rapidly and now counts many FORTUNE 500 businesses among its customers. With their impressive array of almost 60 patents and pending patent applications, ImagineOptix is one of North Carolina State University’s Fast 15 startups.


Immersed Games
University of Florida | 2015 Competitor | www.immersedgames.com

Based in Gainesville, Florida, Immersed Games is creating a video game as a platform for deep, empowering learning experiences. Gamers absorb information about life sciences while building ingame ecosystems.

After raising an angel round of funding in 2015, they launched an early version their educational game, Tyto Ecology, the following year. It is already generating revenue. A launch of Immersed Games’ core product, Tyto Online, is imminent.

Immersed Games is part of the Intel Education Accelerator in Silicon Valley.
Impel NeuroPharma
University of Washington | 2009 Competitor | www.impelneuropharma.com

Impel NeuroPharma, Inc. is a Seattle-based company developing intranasal drug treatments for central nervous system (CNS) disorders. Impel NeuroPharma has developed a novel drug delivery platform, the POD™. The technology administers drugs to the deep nasal cavity improving the biodistribution of many drugs. Impel NeuroPharma’s proprietary device enables entirely new categories of drugs, including biologics, to be administered using a cost-effective, disposable, non-invasive intranasal drug delivery device.

By delivering therapeutics to the upper nasal cavity, the POD nasal delivery platform takes advantage of the vascular rich olfactory region for improved bioavailability and has the potential to target the brain via the olfactory and trigeminal nerves. Delivery of therapeutically meaningful levels of drugs may allow for development of more effective drugs and expand the range of treatment options available to patients.

They have signed service agreements with Camargo Pharmaceutical Services for regulatory consulting and strategic development. Impel has an existing licensing agreement with the Centre for Addiction and Mental Health (CAMH) and is in clinical state programs for Alzheimer’s, migraine and pain management.

Based in Seattle, Washington, Impel NeuroPharma has secured funding from top pharmaceutical companies, the U.S. Department of Defense, Washington’s Life Sciences Discovery Fund, the National Institutes of Health and the Wings medical device network.

Inanovate
Babson College | 2005 Competitor | www.inanovate.com

Inanovate is developing and commercializing a new category of protein screening technology for clinical diagnostics and therapeutics. Inanovate’s first product, a high performance protein microarray surface has since been combined with unique screening and analysis methods to create the Bio-ID. The Bio-ID is a holistic solution to protein screening with applications in protein research, drug development, quality control, biomarker profiling, biomarker validation and clinical diagnostics.

Inanovates’ nanoscale, surface fabrication technology was developed at the Nanoscale Physics Research Laboratory at the University of Birmingham in the United Kingdom. Inanovate owns an exclusive license on patents issued in the United States, the European Union and Japan for its nanostructured, substrate-manufacturing system. It has filed comprehensive patent applications on the core technology underpinning the Bio-ID. The company also owns exclusive licenses to patent filings covering protein biomarkers for the clinical diagnosis of prostate and ovarian cancer.

The company has been awarded government grants through the National Institute of Cancer and the United Kingdom’s Technology Strategy Board, and they have loans through the North Carolina Biotechnology Center. They maintain collaborations and strategic partnerships with Harvard Medical School, Brigham & Women’s Hospital, Dana Faber Cancer Institute, Thermo Fisher Scientific, the University of Birmingham, Johnston Matthey and Teer Coatings.

Inanovate successfully completed testing and benchmarking the first platform to integrate LAS: The Bio-ID 400. Additionally, they announced a financing round that will fund the commercial launch of the Bio-ID. Inanovate continues to build an operational infrastructure to facilitate product development and the growth of commercial relationships. Founded in 2005, Inanovate has offices in Birmingham, England and in the Research Triangle Park, North Carolina.
Incept BioSystems
University of Michigan | 2005 Competitor

Incept BioSystems developed innovative, microscale technologies to provide fertility specialists with breakthrough capabilities. Its technology improved in vitro manipulation, performance and viability of high value cells.

Like many specialized cells, human embryos typically behave much differently while in vitro than they would in the body; this performance gap can limit their developmental growth and viability. Incept’s System for Microfluidic Assisted Reproductive Technology (SMART) platform was the first to deliver unique control of in vitro cell culture environments so that fertility specialists can offer patients new hope in starting a family.

In 2011, Incept BioSystems was acquired by ORIGIO, a Danish company specializing in assisted reproductive technologies. In turn, ORIGIO was purchased by CooperSurgical.

InContext Solutions
University of Chicago | 2009 Competitor | www.incontextsolutions.com

InContext Solutions is an award-winning technology and market research firm specializing in online 3D environment simulations for virtual store research, collaborative store planning and e-commerce. Its research delivers highly accurate behavioral and attitudinal insights into shopper behavior. The company’s collaborative software tools allow companies and partners to make more effective product and store planning, environment design and promotional business decisions.

In 2016, InContext closed another round of funding. Capital from the Series E will be used for marketing and product expansion. InContext introduced its ShopperMX™ Connect in 2015. It is the world’s first web-based DIY software, enabling manufacturers and retailers to create and manipulate 3D simulations of retail environments.

Among its numerous awards and accolades, InContext was named one of America’s most promising companies by Forbes.com. InContext Solutions rang the opening bell at NASDAQ and has been widely covered in the nation’s press. Clients include Coca-Cola, Johnson & Johnson and General Mills. They rank number 3021 in the Inc. 5000 list of fastest growing companies.

Headquartered in Chicago, InContext Solutions also maintains offices in Minneapolis, London and New York City.

Innoblative
Northwestern University | 2014 Competitor | www.innoblative designs.com

Innoblative is developing products to innovate and improve the way surgeons ablate surgical margins post excision. The company’s first product is a radiofrequency ablation applicator to effectively coagulate and ablate soft tissue beds intra-operatively.

Innoblative took first place at the 2016 M2D2 New Venture Competition and won a VentureWell grant. The team was able to ring the NASDAQ closing bell by winning the University of Texas Global Venture Labs Competition. Named one of the 15 Chicago Startups to Watch in 2015, Innoblative has been featured in FORTUNE, CNN Money and the Chicago Tribune.

They have recently partnered with Insight Product Development to build a pre-clinical prototype to test in an animal model. The company plans on submitting a Small Business Technology Transfer Phase I grant to the National Institutes of Health in the near future.

The fourth place winners at the 2014 Rice Business Plan Competition are based in Chicago, Illinois.
Innsystec
RWTH Aachen University, Germany | 2015 Competitor | www.innsystec.com

Innsystec is a spin-off of RWTH Aachen University developing new solutions for mobile data transmission.

Innsystec is developing a radio frequency transmitter frontend, supporting 4G, 5G, wireless routers and other high frequency signals. Their solution will be applicable for example in base stations, wireless routers and cellular devices. The transmitter’s frontend is based upon a novel architecture enabling high-energy efficiency and wide bandwidth while maintaining linearity.

The team acquired a seed funding from the German EXIST program in 2015, which is setting the way for the future technology development.

Inscope Medical Solutions
University of Louisville | 2015 Competitor | inscopemedical.com

Inscope Medical Solutions is a medical device company focused on developing low cost, disposable, connected medical devices. Their first device is the Inscope Laryngoscope, an innovative technology that optimizes intubation, improving this high-risk procedure’s efficiency, speed and safety --- saving lives and lowering costs to healthcare providers.

Since competing at Rice, they have filed three new patent applications and have developed fully functional prototypes of their first device. Having closed a seed round, the company will launch their first product in the second quarter of 2017.

Based in Louisville, Kentucky, Inscope Medical Solutions received the Vogt Award, a highly competitive grant award for manufacturing companies in Louisville. Named one of Louisville’s Hot Dozen companies in 2015, they are recent graduates of the Techstars Cedar-Sinai Healthcare Accelerator. Inscope won second place at the 2015 RPBC.

Intellidemia
Rensselaer Polytechnic Institute | 2009 Competitor | www.intellidemia.com

Intellidemia celebrates a decade with its core product, Concourse. In 2007, Concourse was the first-to-market syllabus management solution. Concourse is a proven, simple-to-use platform that currently handles millions of syllabi each month.

Founded by two MBA students at Rensselaer Polytechnic Institute, Concourse solved a variety of syllabus management problems Rensselaer was encountering. Today, Concourse has become the market-leading syllabus management solution at every type of college throughout the United States and abroad.

RBPC competitors and co-founders Judd Rattner & Edward Levie still man the helm at Intellidemia. Serving clients such as the University of Maryland, Australian National University and Blinn College, the company grew by 50 percent in 2016. Intellidemia is headquartered in New York City.
IOWA Approach
The University of Iowa | 2014 Competitor | http://iowaapproach.com

IOWA Approach has one focus: to develop and commercialize a simple to use and cost-effective ablation therapy for the treatment of atrial fibrillation. There are three key aspects to IOWA Approach’s ablation technique: simple access to the outside of the heart, one lesion to isolate all the pulmonary veins using a loop catheter and a safe yet powerful energy source that rapidly makes continuous, transmural lesions.

IOWA Approach is supported by Boston Scientific Corporation. New funding will help advance product engineering and other preclinical activities for patent-pending, atrial fibrillation ablation technology.

iShoe
Harvard University | 2009 Competitor | www.ishoebalance.com

iShoe Inc. is an early stage, consumer health company. They are commercializing NASA technology originally used on astronauts upon return from space flight. The company produces the En Point, a scale that identifies deteriorating balance; the scale is for both residential and clinical use.

iShoe holds two issued patents on proprietary technology, delivering the first, all encompassing human balance biometric. Recently, the company has been featured in Xconomy, the TMC News, Houston Public Media and the Houston Chronicle. They are part of the Texas Medical Center’s TMCx Accelerator’s inaugural class and based in Houston, Texas.

Ivy Creative Labs
Formerly BlueWave Cleaning System | University of Florida | 2016 Competitor | www.ivycreativelabs.com

Ivy Creative Labs, Inc. is a cleantech company based out of the Innovation Hub at the University of Florida. They created the BlueWave™ Rapid Deodorization and Disinfection Device: a plasma infusion device designed to effectively eliminate odors and kill bacteria, viruses and fungi. The company’s innovative infusion process allows them to accomplish this in as little as five minutes, without the use of any water, detergents or manufactured chemicals.

Ivy Creative Labs is providing their customers with a safe, efficient and effective solution for deodorizing and disinfecting a wide variety of items. Their platform technology can be used in a broad range of applications from deodorizing sports equipment to sterilizing medical equipment.

In 2016, the startup won the GAIN FastPitch contest, the Cox Business Get Started Pitch Contest, the GAIN Top Gun Shootout Pitch Contest and finished in the top nine at the U.S. Department of Energy’s Cleantech UP National Competition. Ivy Creative Labs plans for their prototype to be market ready in January 2017.
KiLife Tech
Brigham Young University | 2015 Competitor | www.kiband.com

KiLife Tech makes safety wearable for dependent individuals.

The Kiband (Ki’band) is the newest technology in child wearables. More than a simple Bluetooth tag, Kiband offers true peace of mind and empowers children to safely explore the world around them. Kiband’s smartband technology is the key to effective prevention of a lost child: allowing parents to set custom perimeters, actively map the environment, alert children when they are getting too far away, and be instantly alerted to a child’s exact location hands free when they wander too far away. These factors allow parents to react immediately before a child gets lost, not after.

The company has three patents in their intellectual property portfolio and is planning a big box retail launch in the spring of 2017. Recently selected for HAX Boost and the 500 Startups program, they were mentioned as one of the most innovative companies in the Consumer Technology Association’s 2016 Annual Innovation Report.

Based in Orem, Utah, KiLife won first place at the 2015 Rice Business Plan Competition.

Klymit
Formerly Argon Technologies | Brigham Young University | 2008 Competitor | www.klymit.com

Klymit is a noble gas technology company based in Ogden, Utah. The company develops and licenses variable insulation technologies. The gasses used by Klymit are inert, meaning they are nontoxic, nonflammable and completely safe for both the user and the environment.

Klymit’s system uses flexible, airtight chambers filled with argon gas instead of down or other fiber insulations. NobleTek insulation is thinner, warmer and lighter weight than fiber insulators. Klymit markets its technology through its camping pads, sleeping bags and rafts. The company’s products can be found at outdoor gear stores throughout the United States and Canada or online. Their newest product is a daypack.

After winning numerous awards and notice from the likes of Business Week, Popular Science and Gear Junkie, the company reportedly sold the apparel side of its business in 2013. The spin off is Reno-based nudown.

Klymit ranked number 981 on the 2016 Inc. 5000 list of fastest-growing businesses in the nation.
KnowCharge Inc.
University of New Brunswick | 2010 Competitor | www.knowcharge.com

KnowCharge is a paper technology company based in Fredericton, New Brunswick, Canada. The company’s patented technology brings together market-leading static protection with sustainability, providing electronics manufacturers and component distributors with a new electrostatic discharge (ESD) packaging solution that not only protects sensitive electronics but also lowers cost.

Knowcharge’s packaging products consists of ESD paper boxes, ESD paper void fill, and ESD moisture or shielding paper bags. The company’s ESD products lower costs by decreasing the labor, overhead and disposal costs associated with non-recyclable foams and plastic packaging during the electronic manufacturing process.

As part of its global product launch in 2012, KnowCharge introduced the first patent-pending ESD moisture paper bag and ESD shielding paper bag at the electronica trade show in Germany. To support the international launch, the company established production and distribution partnerships in both North America and Asia.

In 2013, KnowCharge Inc. was recognized by the New Brunswick legislature for its world-leading commercial technology.

Lark Technologies
Massachusetts Institute of Technology | 2010 Competitor | www.lark.com

Founded in 2010, Lark Technologies is a consumer electronics company that makes wearable wellness monitors for sleep, exercise and diet. Its products include larklife, lark and lark pro. The company takes a holistic approach to developing its products that includes innovative hardware, intuitive software and expert-backed content.

Fast Company named Lark one of the Top 10 Most Innovative Consumer Electronics Companies. It has received broad coverage in the national press including The Wall Street Journal, The New York Times, InStyle magazine, Oprah Magazine, ABC News and CBS News. Forbes named founder Julia Hu one of 20 Female Entrepreneurs to Follow on Twitter. Lark is a venture-backed company based in Mountain View, California.

Leuko Labs
Massachusetts Institute of Technology | 2016 Competitor | http://leuko.mit.edu

Leuko Labs is developing a personalized home blood test to indicate when patients are ready for the next infusion ahead of schedule. Their optics-based test is non-invasive, detecting key informative blood cells through the skin without pain, a potentially transformative improvement in chemotherapy management.

The key blood cells for Leuko’s cancer application are also the key blood cells detected in acute infection. A simple test for these cells is sought throughout the resource poor regions of the world, especially where HIV-associated bacterial infections are endemic.

Leuko presented at the StartMIT Innovation Night in January 2017. Funded by the Coulter Foundation and the Deshpande Center, they intend to begin a second round of human trials with chemotherapy patients at Massachusetts General Hospital. Leuko is based in Cambridge, Massachusetts.
Lumedyne Technologies
Formerly Omega Sensors | San Diego State University | 2007 Competitor

Lumedyne Technologies specialized in next generation, micro-electrical-mechanical systems (MEMS)-based displacement sensors for a variety of markets.

The company won much recognition throughout its history, winning awards for leadership (Lumedyne’s CEO was selected as a regional finalist for the Ernst & Young Entrepreneurs of the Year award), teamwork (Excellence in Technology Transfer “Success through Collaboration” with SPAWAR) and for technology. Lumedyne’s technology was recognized as one of the “Worlds Best Technologies” at the annual World’s Best Technology Showcase.

Lumedyne Technologies was acquired in 2015. All details and terms of the sale are confidential.

LymphaTech
Georgia Institute of Technology | 2014 Competitor | www.lymphatechnology.com

LymphaTech is developing a 3D scanning system and patient engagement software for measuring and monitoring lymphedema, improving the lives of cancer survivors. Lymphedema is a swelling disease that affects nearly half of all breast cancer survivors. The company’s technology measures and tracks limb volume to identify symptoms early enough to provide effective treatment.

Funded by the U.S. Agency for International Development and the Bill and Melinda Gates Foundation, LymphaTech is establishing new collaborations to further healthcare in the developing world. Their technology is utilized in rural Ethiopia to predict the need for C-section delivery caused by obstructed labor. In Sri Lanka, their technology is used to monitor lymphedema caused by parasites.

Based in Atlanta, Georgia, LymphaTech graduated from the National Science Foundation I-Corps program. The company placed sixth overall at the 2014 Rice Business Plan Competition.

Medical Informatics
Rice University | 2013 Competitor | www.medicalinformaticscorp.com

Medical Informatics Corp (MIC) augments clinicians' workflow with apps that help them spend more time treating their patients and less time focused on documentation and the immense amount of data generated by bedside devices in the ICU. Their apps look for signs of deterioration that can sometimes be tricky to spot, even with a trained eye, and alert the caretakers to take a closer look at the potential deterioration. MIC’s apps ultimately improve quality of care and can save patient's lives.

In 2016, MIC launched three new applications for remote monitoring and won the ECRI Institute’s 10th Annual Health Devices Achievement Award. The company offices in the life science commercialization cluster at the Texas Medical Center Innovation Institute in Houston, Texas.
Medtric Biotech
Purdue University | 2012 Competitor | www.medtricbiotech.com

Medtric Biotech is developing antimicrobial technologies for clinical, industrial and agricultural applications.

The company’s core technology is an innovative, antimicrobial nanoemulsion. The stable nanoemulsion possesses significant antimicrobial activity, and scientific studies have shown rapid inactivation (fewer than 60 seconds) of multidrug resistant bacteria strains such as MRSA (Methicillin-resistant Staphylococcus aureus) and VRE (Vancomycin-resistant enterococcus), fungus and viruses. Medtric has implemented this nanotechnology into products designed initially for wound care with additional applications for industrial and agricultural sectors.

Medtric won second place at the 2012 Rice Business Plan Competition and has taken top honors at other competitions. The Medtric team earned Purdue University’s 2013 Award for outstanding commercialization efforts. The Lafayette, Indiana-based company has received grants from Purdue’s Trask Innovation Fund, Indiana CTST for project development, BIOMEDSHIP and Purdue’s Emerging Innovations Fund.

Microfluidic Innovations
Purdue University | 2010 Competitor | www.microfluidicinnovations.com

Microfluidic Innovations has developed a programmable lab on a chip, the first multipurpose, software-programmable microfluidic lab on a chip (LoC). Instead of designing assay-specific chips, developers will be able to use a single chip, simply writing or downloading a program for each experiment. Example assays using Microfluidic’s platform have been developed for glucose level testing, particle sorting, enzyme kinetics and bacteria culturing and synchronization.

Microfluidic’s system can cater to wide market segments including contract research organizations, pharmaceuticals and academic research. Microfluidic Innovations has two major global customers.

Headquartered in West Lafayette, Indiana, Microfluidic Innovations has been awarded two Small Business Innovation Research Phase I grants. The company also received a grant from Purdue’s Emerging Innovations Fund.
Microlution
University of Illinois at Urbana-Champaign | 2005 Competitor | www.microlution-inc.com

Microlution Inc. pioneered the development of integrated micro manufacturing solutions for precision parts. Traditional machines are too slow and too expensive to create the micro parts required for today’s advanced automotive, consumer, medical and aerospace products. Microlution’s micromachining products use both laser and milling technologies.

Microlution has been featured in trade publications including Micro Manufacturing Magazine, Commercial Micro Manufacturing and Engineering TV. With its partners, Microlution was awarded a grant from the U.S. Department of Energy to develop an energy efficient method for micromachining complex shapes using ultrafast laser technology. Additionally, the University of Cincinnati BioMicroSystems Labs successfully used Microlution to machine precision microfluidic channels for particle separation and electrochemical solutions. Based in Chicago, Illinois, Microlution proudly designs and builds every machine in the United States.

In May of 2016, Microlution was acquired by GF Machining Solutions. At the time of sale, Microlution was generating $10 million in annual sales and had a workforce of 30 people. Microlution continues to be run by founders and RBPC alumni Andy Philip and Andrew Honegger. Lincolnshire, Illinois-based GF Mining Solutions intends to use their purchase to broaden their technology portfolio and better serve clients in the medical and aerospace industries. Details of the sale remain confidential.

MicroTransponder
The University of Texas at Dallas | 2008 Competitor | www.microtransponder.com

Using decades of neuroscience research, MicroTransponder Inc. (MTI) has developed the Paired Vagus Nerve Stimulation System (Paired VNS™ System). The Paired VNS™ System treats two separate neurological conditions. The Serenity® System suppresses tinnitus. The Vivistim® System enables stroke survivors to regain upper limb mobility.

With 22 U.S. patents in their intellectual property portfolio, MicroTransponder will begin European Union sales in 2017.

MicroTransponder’s funding comes from venture capital groups as well a grant from the U.S. Department of Defense. The National Institutes of Health have awarded MicroTransponder eight additional grants. The company published a paper in Nature magazine and received many awards and accolades including the Tech Titan Award and the Frost & Sullivan Early Stage Investment of the Year Award. Founded in 2007, MicroTransponder is based in Austin, Texas.

Midway Pharmaceuticals
University of Chicago | 2005 Competitor | www.midwaypharma.com

Midway Pharmaceuticals, Inc. is developing proprietary drugs to treat gastrointestinal (GI) and systemic diseases.

Their platform technology, licensed from the University of Chicago, uses high molecular weight polymers to inhibit pathogenic behavior of bacteria in the GI tract, enhance gut-barrier function and promote GI healing.

In 2015, Midway founder and CEO Rifat Pamukcu was inducted into the American Institute for Medical and Biological Engineering’s College of Fellows.
Miret Surgical
Stanford University | 2009 Competitor | http://miretsurgical.com

Miret Surgical is a medical device startup spun out from Stanford University’s Biodesign program.

The company designs and develops trans-abdominal, minimally invasive, surgical tools for laparoscopic surgical procedures. These tools allow extremely small incisions that leave no visible scars by enabling the assembly of complex tools inside the patient’s body. Existing scar-free techniques are burdened by steep learning curves and high costs. Miret’s Percuvance system requires minimal surgeon retraining and aligns with current insurance reimbursement plans.

In November 2016, the U.S. Food and Drug Administration granted Miret Surgical 510k clearance for its percutaneous surgical system. They are based in Elmhurst, Illinois.

Modvion
Chalmers University of Technology, Sweden | 2016 Competitor | www.modvion.com

Modvion develops modular wind power towers in inexpensive composite materials.

By supplying modular towers to the wind power industry, Modvion enables tripled generation capacity, transportability and cost efficiency at greater hub heights. With a biomaterial construction, Modvion reduces CO₂ in the atmosphere, building renewables with renewables.

Modvion’s Joakim Örneblad was elected one of Sweden’s most innovative entrepreneurs by ÅForsk and SISP. The company was accepted into the MassChallenge Boston 2016 cohort as well as the EU Climate KIC program. They are collaborating with a conglomerate of universities and companies to pursue large development grants.

Modvion headquarters in Göteborg, Sweden.

MODX
Formerly Enterprise Theory | Southern Methodist University | 2009 Competitor | www.modx.com

MODX is a content management platform. It is equal parts PHP (an embedded scripting language used in Web design) application framework and content management system (CMS). MODX excels at web content management and content management framework duties.

The company has two open source CMS platforms: MODX Evolution, released in 2005 and MODX Revolution, released five years later. Both platforms are actively maintained and developed, and each are used by tens of thousands of users to power hundreds of thousands of websites.

Founded in 2004, the company bootstrapped its way into profitability. MODX has a user and developer community of more than 42,000, and their core software has surpassed two million downloads. It has been translated into over 20 different languages. MODX won the 2013 People’s Choice and 2012 Critic’s Choice for Best Open Source CMS.

MODX partners with Ohio State University to develop accessibility technologies for the visually impaired using assistive technology. The company’s developers are working on issues such as keyboard navigation, visual contrast, screen readers and focus indication for an accessible CMS.

In 2013, MODX spun out a cloud platform company, SiphonLabs. Based in Dallas, their operations are supported by employees and contractors in the United States (Dallas, Portland, Taos), Canada (Nova Scotia, British Columbia) and the United Kingdom.
**MouseHouse**  
The University of Chicago | 2013 Competitor | www.mousehouseapp.com

MouseHouse is an iPad plus web application that allows researchers in the life sciences research industry to track experimental data, health and complex breeding schemes of laboratory mice.

MouseHouse saves researchers time and money by delivering three value propositions: proprietary embedded mouse optimization software helps manage breeding schemes and reduce costs by suggesting animals to cull; a collaborative interface allows researchers within a lab or multiple parties within an institution to share and record data for the same animals; and an intuitive iPad drag-drop interface eliminates redundant data entry and saves time. The MouseHouse application is available on the Mac App Store.

Chicago-based MouseHouse garnered media attention on CNNMoney, CNBC and the Houston Chronicle. The company was a Silver Winner at the 2013 MassChallenge and was a top six finalist in the 2013 Rice Business Plan Competition.

**Movellus Circuits**  
University of Michigan | 2014 Competitor | movelluscircuits.com

Movellus Circuits’ patented VirtualAnalog™ software technology frees systems-on-chips (SoCs) from the analog limitations resulting in faster time-to-market and architectural innovation to lower chip-level power consumption.

Movellus Circuits currently offers a wide range of timing solutions for not only the current market, but also the emerging ultra-low power, low voltage markets. Their constantly expanding product portfolio includes all-digital PLLs, DLLs, digitally controlled oscillators, pulse-width modulators, time-to-digital converters and digital-to-analog converters.

The Ann Arbor, Michigan-based company won the grand prize as the best emerging company at the 14th annual Great Lakes Entrepreneurs Quest business plan competition in 2015. They were semifinalists in 2016’s Accelerate Michigan Innovation Competition. Semiconductor customers have been verifying Movellus’ technology since 2015.

**MyHelpster**  
The University of Manchester, England | 2015 Competitor | http://myhelpster.com

MyHelpster provides expert help with technology, making the lives of freelancers, entrepreneurs and those who work from home easier and more relaxing. MyHelpster is a place where experts help like friends. All advice is instant, on demand and available to everyone on a pay as you go basis. With the press of a button the countdown starts and within minutes, a friendly Helpster will help you over the phone and on your device’s screen. Help is available from Technical Helpsters, Office Helpsters, Design Helpsters, Language Helpsters, Marketing Helpster and Programming Helpsters.

The company uses its own virtual back-office, comprised of the expert knowhow of hand-picked freelancers and a proprietary software platform of collaboration tools to help uses directly on their screen. Through this, MyHelpster ensures that all delivered services are quality assured and of helpdesk standard.

Backed by UKTI Sirius Programme & Virgin Startups, MyHelpster is headquartered in Manchester, England. The business has over 2,000 paying customers.
Nano Precision Medical
University of California, San Francisco | 2009 Competitor | nanoprecisionmedical.com

Nano Precision Medical (NPM) is developing a small, rice-grain sized implant with the NanoPortal™ membrane to provide long-term, constant-rate delivery of therapeutics for many months. The rice-grain sized device is designed for easy implantation under the skin.

Their all-titanium capsule provides long-term, constant-rate delivery of therapeutic molecules using a proprietary titania, nanoporous membrane technology called NanoPortal™. Multiple drug candidates can be delivered using NanoPortal. Exenatide was selected as the first drug candidate because of the unmet medical needs in Type 2 diabetes mellitus (T2DM), and there is room for improvement with currently available treatments. The combination of device/drug will improve outcomes by ensuring compliance, with the potential to lower overall costs of care.

The company was founded in 2009 and has funding from experienced angel investors and a large pharmaceutical company. U.S. Food and Drug Administration approval will be sought using a 505(b)(2) strategy. The company was featured in the UCSF Magazine, the Berkeley BioEngineering Graduate Newsletter and the San Francisco Business Times.

After spending its early years within the QB3 incubator network, Nano Precision Medical is now based in Emeryville, California.

NanoLinea
Rice University | 2014 Competitor | http://nanolinea.com

NanoLinea creates novel medical treatments based on carbon nanotube fiber technology. Its flagship product is CardioLinea, a minimally invasive, restorative treatment for ventricular cardiac arrhythmia. This type of arrhythmia arises from scar tissue in the heart, which disrupts normal pathways of electrical conduction; heart attack survivors are particularly at risk for this condition.

CardioLinea is a safe, durable, truly therapeutic implant, which restores healthy conduction and avoids the risks and costs associated with currently available treatments. The incorporation of carbon nanotube fiber will allow the company to create a medical implant with an unprecedented combination of conductivity, flexibility and durability.

NanoLinea won the 2014 Goradia Innovation Prize. The company has since converted from a limited liability company to a Delaware C-corp. Additionally NanoLinea is part of the TMCx accelerator program in Houston’s Texas Medical Center.
Navillum Nanotechnologies
The University of Utah | 2013 Competitor | www.navillum.com

Navillum Nanotechnologies LLC is a chemical manufacturing company. It has developed and patented an innovative method for fabricating quantum dots and other types of semiconducting nanocrystals at commercial scale. Despite the great potential of quantum dot technology, producing them in large-scale amounts is a major barrier to commercialization. Navillum has the solution to bridge this gap so that quantum dot applied technology finally can be supplied to end-use application manufacturers.

Founded in early 2012 by scientists at the University of Utah, the company received exclusive rights on two pending technology patents from the University of Utah. It has received funding support from the National Science Foundation and the Utah Technology Commercialization and Innovation Program. Navillum was a finalist in multiple cleantech competitions including the U.S. Department of Energy’s Cleantech Competition at the University of Colorado, the National Clean Energy Business Plan Competition and Cleantech Open 2012. Additionally, Navillum was a top three finalist in the Governor’s Energy Technology Innovation Award.

Navillum has moved into the BioInnovations Gateway Incubator facility in Salt Lake City, Utah. The Utah Technology Council awarded Navillum with a Utah Innovation Award, recognizing the company’s technology as one of the state’s top eight innovations.

Neopenda
Columbia University | 2016 Competitor | www.neopenda.com

Neopenda is a Chicago-based social enterprise in the global health space. The technology startup company is striving to engineer innovative healthcare solutions that give newborns in low-resource settings the healthy lives they deserve.

Their first product is a small, low-cost wearable vital signs monitor. It is designed for critically ill newborns being cared for in hospitals in low-resource countries. Neopenda re-engineered clinically validated technologies into a simple, multiparameter sensor array that measures heart rate, respiratory rate, blood oxygen saturation and temperature. The low-power sensors use rechargeable batteries and wirelessly transmit data to a central monitor, which alerts nurses when a newborn is in distress.

Funded by successful Kickstarter campaign in May 2016, Neopenda is currently preparing for the first pilot studies of their neonatal vital signs monitor in Uganda. They have filed a provisional patent, finalized their MVP (Minimum Viable Product) and been featured in The Washington Post, gizmag, Fast Company and Forbes. The Neopenda team was a finalist at the 2016 SXSW Eco Startup Showcase and the 2016 Tamer Fund for Social Ventures, and they placed first at the 1st 2016 Vodafone Americas Foundation Wireless Innovation Project. The company is based in Washington, D.C.
**Neurable**
University of Michigan | 2016 Competitor | www.neurable.com

Neurable’s wants to create a world where people live without limitations. Their revolutionary brain-computer interface allows people to control software and devices using only their brain activity.

This is not “mindfulness” or “neuro-feedback.” Neurable’s brain-computer interface uses electroencephalography (EEG) to record brain activity, analyze data and provide users with full three-dimensional control in real time. Dry electrodes track brain activity, and the EEG signals are translated into the appropriate action within a game or other virtual backdrop. Their technology has enabled people to play games, control toys and drive a full-sized car using only their thoughts.

Based in Boston, Massachusetts, Neurable transforms augmented and virtual reality by placing the user’s mind in the center of the experience. Through Neurable, AR (alternate reality) and VR (virtual reality) can finally achieve their full potential using the power of your mind.


**Nikola Labs**
The Ohio State University | 2015 Competitor | www.nikola.tech

Nikola Labs is a technology company that specializes in wireless power solutions and radio frequency (RF) energy harvesting for mobile devices. Using a proprietary energy harvesting system, Nikola Labs technology safely and efficiently converts RF signals – like Wi-Fi, Bluetooth and LTE – into direct current (DC) power. The result is a clean, usable energy ideal for low-power wireless sensors. This energy will be crucial to powering the Internet of Things – our near future, where everyday objects will operate and communicate independently.

The first application of Nikola’s system is an iPhone 6 case that harvests wasted RF energy transmitted by the phone itself. The self-harvesting case is just one step in a much greater revolution that Nikola Labs is leading, the wireless power revolution, which will define what it means to live and work in the 21st century. This first step is important as it proves that RF can, in certain situations, be recycled effectively for extra power.

EE Times named Nikola Labs to their 2016 list of Emerging Companies to Watch, and the company won the best pitch contest at the Plug and Play accelerator program. They are supported through venture funding, a grant from Ohio Third Frontier and a Kickstarter campaign. The company is headquartered in Columbus, Ohio.
**NovaBio Technologies**  
Formerly Ligadon | The University of Utah | 2012 Competitor | dollyholt@gmail.com

NovaBio Technologies provides a simple, effective device for ligament and tendon recombination. Ligament and tendon injuries involve lacerations that are treated with sutures, but, as the tendon or ligament stretches, high tension often tears the sutures and often requires repeated surgeries. NovaBio’s device equally distributes tension along either end of the ligament or tendon, preventing the tissue from tearing under strain.

The company filed a nonprovisional patent as well as a PCT (Patent Cooperation Treaty) patent application. Funding, largely from the NCIIA (National Collegiate Inventors and Innovators Alliance) has been put toward patent fees and prototype development. They recently received additional funding though a Utah TAP (Tuition Assistance Program) grant.

NovaBio has developed a fully functional prototype and has conducted preliminary mechanical tests showing the efficacy of the device. The company won the grand prize at OneStart and was recently highlighted in two local TV shows. The team is pursuing licensing agreements with several medical device companies.

**Novira Therapeutics**  
Formerly Molecmo Nanobiotechnologies | Harvard University | 2007 Competitor | www.noviratherapeutics.com

Based in Doylestown, Pennsylvania, Novira Therapeutics Inc. discovered and developed first-in-class therapies for the treatment of chronic hepatitis B (CHB) infection, a global disease with a high level of unmet medical need.

Novira Therapeutics built a world-class team with a proven track record of success in drug discovery and development combined with a deep expertise in HBV virology. The research and development team employed innovative chemistry and biology technologies to discover small molecule inhibitors of the HBV Core or capsid protein as well as other drugs with novel modes of action. The company’s novel therapeutic antivirals overcome the limitations of current CHB therapies when used either as monotherapy or in combination with existing standards of care.

Novira Therapeutics was acquired by Johnson & Johnson in December 2015.
NuMat Technologies
Northwestern University | 2012 Competitor | www.numat-tech.com

NuMat Technologies is a materials technology company changing the way the world stores, separates and transports gases. The company is committed to enabling fundamental performance shifts in the gas storage and separations industries through its tailor-designed nanoporous materials. With its patented supercritical activation technique, NuMat’s synthesized materials retain astronomical internal surface areas. One of its materials holds the world record for surface area, with just one gram being able to cover two acres of land when unfolded.

NuMat is able to rapidly prototype materials with its patented computational tools, screening millions of hypothetical structures in a matter of hours. Its metal organic framework (MOF) patent portfolio is licensed from Northwestern University. The company builds its materials from the ground up with atomic precision and then integrates these materials into high value products and processes.

NuMat recently announced a partnership with The Linde Group to develop commercial applications for NuMat’s MOFs. Named a Top MBA Startup of 2016 by Poets & Quants, the company raised additional funding from Chicago’s Clean Energy Challenge and were awarded contracts by the U.S. Army and the Department of Defense.


NWBOTS
Massachusetts Institute of Technology | 2014 Competitor | www.nvbots.com

NWBOTS® creates automated, enterprise 3D printing solutions that fix some of the industry’s toughest problems. Entirely dedicated to disruptive innovation, our research and development program NVLABS has recently developed the only 3D printing technology that can print multiple metals in the same build, supporting a growing list of metals that includes stainless steel, titanium, nickel, copper, nickel, aluminum, zirconium, silver and palladium. Users also print at ultra-high speeds — over 10 times faster than existing solutions — and at a significant cost advantage.

Their flagship product, the NVPro™, is the world’s first end-to-end 3D printing solution with patented automated part removal. Essentially an automated factory in a box, the NVPro runs continuously, 24-7 from any device when paired with the NVBOTS cloud-based interface.

In January 2017, NWBOTS spun out a metal printing company, Digital Alloys. Digital Alloys has already raised a round of venture funding and will headquarter in Burlington.

NWBOTS is one of Fast Company’s Top 10 Most Innovative Companies in Education for 2016 and raised a Series A in the third quarter of 2016. Co-founder, Chris Haid, was named to Forbes’ 2015 list of 30 Under 30 in Manufacturing and Industry. NWBOTS is headquartered in Boston, Massachusetts.
Oncolinx
Dartmouth College | 2016 Competitor | www.oncolinx.com

Oncolinx is a biotech startup with office in Boston, Massachusetts and London, England.

They are developing the next generation of antibody-drug conjugates (ADCs)—powerful, targeted cancer therapies that are more effective and have dramatically fewer side effects than current methods of cancer treatment. These therapies can be targeted to nearly any type of cancer. The highly selective nature of the drug ensures that healthy cells won’t be destroyed.

Their drug will be tested for efficacy and drug metabolism in the U.S. National Laboratory aboard the International Space Station’s sometime in 2017. In the microgravity of space, cells grow more organically - in 3D - mimicking how cancer cells grow in the body.

Oncolinx partners with more than dozen pharmaceutical companies and wants to begin human trials by late 2017.
They have incubator space in the Mass Innovation Labs and the TMCx. The company won the grand prize at the 43North competition and placed fifth at the Rice Business Plan Competition.

OPUS 12
Formerly Obtainium | Stanford University | 2015 Competitor | www.opus-12.com

Based in Berkeley, California, OPUS 12, is developing revolutionary technology that transforms CO₂ emissions into cost-competitive liquid fuels and chemicals, using only water and clean electricity as inputs.

Their technology can bolt onto any existing source of industrial CO₂ emissions, from petroleum refineries to fossil fuel power plants. The products they generate are green in two ways: they have a lower carbon footprint than conventional fuels and chemicals, but can be produced at similar cost.

The Opus 12 team has won the U.S. Department of Energy’s Transformational Award plus a number of grants from the National Science Foundation, NASA and the U.S. Department of Energy.

Since competing at Rice, OPUS 12 has been raking in awards and accolades. Nicholas Flanders was named on 2016 Forbes’ list of 30 Under 30 in Energy. The team won the Forbes for-profit Change the World Competition at the Under 30 Summit in Boston, was named a semi-finalist at the NRG Carbon X-Prize and recently won the Roddenberry Foundation grand prize, funds from which will expedite the team’s road to commercialization. They are hoping for a product release by December 2017.
OrthoAccel Technologies
University of Illinois at Chicago | 2006 Competitor | www.acceledent.com

Based in Houston, OrthoAccel® Technologies, Inc. is a privately owned medical device company developing, manufacturing and marketing products to enhance dental care and orthodontic treatment.

OrthoAccel developed and sells AcceleDent®, the first FDA-cleared clinical approach to safely accelerate orthodontic tooth movement by applying gentle micropulses (SoftPulse Technology) as a complement to existing orthodontic treatment. Used daily by patients for approximately 20 minutes, it can reduce treatment time by 50 percent. The U.S. Patent and Trademark Office issued OrthoAccel a patent for its hands-free AcceleDent in 2013.

In 2016, the company added three new patents to their portfolio, bringing their total to 13. Deloitte listed OrthoAccel as number 69 on their 2015 Technology Fast 500 list, and founder Mike Lowe was recognized as a 2014 Houston Business Journal 40 Under 40 honoree the same year. In 2015, the AcceleDent device won the GOOD DESIGN Awards Program and the Best in Biz Award as the most innovative consumer product of the year.

The company and its product, which is offered at more than 2,000 orthodontic locations nationwide and distributed in over 20 countries, have been featured in a number of news outlets including The Business Makers show and ABC News.

Owlet Baby Monitors
Brigham Young University | 2013 Competitor | www.ownletcare.com

Owlet Baby Monitors have developed a wireless device to monitor a sleeping infant’s oxygen levels, heart rate and temperature and provide rollover alerts. The Owlet Smart Sock is hypoallergenic, wireless and does not use any adhesives. The electronic components are housed in a water-resistant, medical-grade silicone case to protect the child from any electrical contact. Powered by a rechargeable battery that will last for up to two days, the sock uses Bluetooth 4.0 to wirelessly transmit information to a phone. The accompanying app is available in the iPhone App Store.

A recent funding round plus a grant from the National Institutes of Health will allow Owlet to expand into international retail distribution, launch new products and initiate an infant health study. Named Best Startup at the 2016 International Consumer Electronics Show, Owlet Baby Monitors has been featured in numerous publications including The Wall Street Journal, The Washington Post and ABC News. The company, based in Provo, Utah, was a finalist at the 2013 Rice Business Plan Competition.

PathoVax
Harvard University | 2016 Competitor | www.pathovax.com

PathoVax LLC is a private biotechnology startup focused on the development of a universal Human Papillomavirus (HPV) vaccine to provide prophylaxis against all cancers and diseases relating to the Human Papillomavirus (HPV).

Established by Johns Hopkins researchers, the company develops and implements cutting edge-technology in HPV prophylaxis and other indications. Their pilot vaccine, RGVax, promises to provide protection against all 15 oncogenic HPVs and many others that cause various warts.

The Pathovax team is in Buffalo, New York at the 43North accelerator. Funding from the 43North business competition and an award from Maryland’s TEDCO’s MII will allow the team to refine their clinical strategy. They are gearing up for clinical trials in 2018.

PathoVax was a MassChallenge Boston finalist and was recognized as OneStart Americas’ top 10 healthcare startups of 2016.
Pedal Forward
George Washington University | 2015 Competitor | www.pedalforward.com

Pedal Forward builds sustainable bamboo bicycles that turn heads without breaking the bank and reinvests a portion of their profits into global transportation needs. Over 70 percent of the world’s poor live without adequate transportation. Bicycles empower people to find jobs, go to school and gain access to better health care.

It was this commitment that made them the winner of the 2012 Clinton Global Initiative University Commitment Challenge. They won the Social Impact Venture Prize at the 2015 Rice Business Plan Competition. In February 2016, Pedal Forward completed and exceeded their funding target on Kickstarter.

Perception Robotics
Formerly Somatis Sensor Solutions & Somatis Technologies | University of Southern California | 2011 Competitor | perceptionrobotics.com

Perception Robotics is a sensor technology company focused on biologically inspired, material handling systems. They are the first company to give robots an integrated sense of touch and vision, much like the hand-eye coordination of humans and a gecko-inspired gripper that requires no power to actuate.

In the past year, Perception Robotics won two Small Business Innovation Research grants: a Phase I award from NASA and a Phase II grant from the National Science Foundation. Part of the LA Cleantech Incubator, the company is based in Los Angeles, California.

PhoneSoap
Brigham Young University | 2012 Competitor | www.phonesoap.com

PhoneSoap is a device built to safely sanitize and clean cell phones with powerful, ultraviolet germicidal (UV-C) light. It is a small box that simultaneously charges and sanitizes cell phones using UV-C light, an electromagnetic radiation used in hospitals and clean rooms around the world.

The PhoneSoap Charger plugs into a socket and has an internal USB port to which users can connect a charging cable and their phone, which is then closed inside the box. The charging box contains two UV-C lights that kill 99.99 percent of bacteria and germs in less than five minutes. The charger features an indicator light to let users know when charging is complete and has acoustic outlets to ensure that alarms and notifications can be heard.

In January 2015, the PhoneSoap team pitched their company on Shark Tank and struck a deal with Lori Grenier. They have expanded their product line with a PhoneSoap Polish and a Cleaning Roller and have almost completed work on an eight-device multi-charger. On a Shark Tank update in May 2016, PhoneSoap founder Dan Barnes said that every appearance on the QVC shopping channel resulted in a boost in sales.

They have been widely featured in the media: The Wall Street Journal, Fox News, Inc., MSNBC and on the Discovery Channel. The PhoneSoap sanitizer is available at Staples, on Amazon and through the PhoneSoap website. Lori Grenier is finalizing a deal for the Bed Bath and Beyond stores—all 1,500 of them—to carry PhoneSoap. The team is now searching for new warehouse space so they can stay ahead of demand. Their headquarters are in Provo, Utah.
Picasolar
University of Arkansas | 2013 Competitor | www.picasolar.com

Picasolar is developing a patent-pending selective emitter technology for crystalline silicon solar cells. The Hydrogen Super Emitter (HSE) process increases solar cell conversion efficiency while reducing the number of silver gridlines. This enables a manufacturer to save money through reduced materials use (silver is the second most costly part of cell processing) while increasing the total watts produced.

The HSE technology is a single step that occurs at the end of the manufacturing line, minimizing downtime and reducing implementation complexity. The HSE process utilizes atomic hydrogen that can be generated from tap water. No toxic chemicals are needed. This technology was developed internally at Picasolar’s sister company, Silicon Solar Solutions, a 2009 competitor in the Rice Business Plan Competition. Both companies are startups working out of the Genesis Technology Incubator at the Arkansas Research and Technology Park.

The Picasolar team, lead by founder and RBPC alumnus Douglas Hutchings, scored their third U.S. Department of Energy SunShot Award, becoming the first company to win three SunShot grants. The most recent grant will fund a pilot project to produce 1,000 solar panels using Picasolar’s hydrogen super emitter technology. Picasolar headquarters in a 2,300 square foot research facility in Fayetteville, Arkansas.

Pixel Velocity
University of Michigan | 2002 Competitor | www.pixel-velocity.com

Pixel Velocity® is a software, sensor and analytics company specializing in industrial automation product solutions. Their remote monitoring solution, hydrocarbon leak detection system and event management platform deliver insight in real time, ensuring reliability, business continuity and safer operating conditions for their customers. Pixel Velocity has an unparalleled understanding of how to empower enterprises to leverage imagery and data to manage risk while providing a significant return on investment in terms of operational efficiency and seamless integration of automated control systems.

Pixel’s Lead Detection System was named the New Technology Development of the Year at the Oil and Gas Northeast ceremony in 2016. Shortly after a Series B funding raise in 2015, the company announced the release of four new products. Founded in 2001, the company is located in Ann Arbor, Michigan.

PK Clean
Massachusetts Institute of Technology | 2011 Competitor | www.pkclean.com

PK Clean builds facilities that convert plastic waste into usable fuels such as diesel. Their process is sustainable, resulting in low-sulfur fuel, high-energy payback and zero toxic emissions.

PK Clean’s breakthrough technology was initially developed at MIT. Their first operational facility has been successfully demonstrated in Salt Lake City, Utah, and the next facility is currently being built for a customer and will be deployed at the end of 2017. In March 2017, PK Clean signed an agreement with SuperBox’s environmental division to establish joint interest in operating plant.

Founder & CEO Priyanka Bakaya was named to the 2012 Forbes’ list of 30 Under 30 in Energy. The company is financed by the Salt Lake City Economic Development, the Utah Governor’s Office of Economic Development, Steve Case’s Alps Investment Holdings, venture capital and private money. PK Clean has been frequently featured in publications including FORTUNE, CNN Money, Inc. and the Harvard Business Review. The company, based in Boston, Massachusetts, placed third overall at the 2011 Rice Business Plan Competition.
PolyDrop
University of Washington | 2014 Competitor | www.polydrop.net

Based in Bellevue, Washington, PolyDrop, LLC is a specialty chemical company focused on lightweight materials for ESD (electrostatic discharge) and anticorrosion protection.

The company focuses on problematic electrostatic dissipative coatings with the goal of extending functionality of existing coatings through the facile incorporation of anti-static and static-dissipative properties. Their patented technology was developed in the laboratories of the University of Washington in Seattle.

The PolyDrop formulation uses a proprietary, conjugated polymer nanotechnology that is introduced into coatings as a liquid additive. The additive requires no additional equipment or capital investment for the production line. PolyDrop meets engineering specifications for electrostatic discharge dissipation with significantly less loading than metallic solutions, helping aircraft manufacturers obtain the weight reduction they desire. In addition, PolyDrop’s formulation resists cracking, peeling and chipping, and its adhesive qualities are superior to any other product available.

A MassChallenge Finalist and a TechConnect Showcase Innovation Award winner, PolyDrop was awarded a Small Business Innovation Research Phase II grant from the National Science Foundation. They have four provisional patents on file with the U.S. Patent and Trademark Office, and their scale-up is complete. PolyDrop is currently pursuing strategic partnerships with three major coating manufacturers.

Power2Switch
University of Chicago | 2010 Competitor | www.power2switch.com | www.interactivebill.com

Power2Switch used design, data, and technology to help consumers make responsible decisions about their energy usage and expenses. The company helped residents and businesses reduce energy costs through an online comparison of competitive rates and an automated switching process to new electricity suppliers. The service was provided free of charge. The company also delivered greater awareness of energy deregulation, created a competitive landscape for suppliers and promoted the use of renewable energy.

Power2Switch, part of the 2011 class at Excelerate Labs, was selected as one of five U.S. startups to participate in President Clinton’s 2011 Clinton Global Initiative. The company was chosen as one of the Top 10 Up and Comers at the Chicago Innovation Awards. It was featured in the Chicago Tribune, Fast Company, Mashable and on the Chicago affiliates of both ABC and NBC.

In September 2013, Power2Switch was acquired by Choose Energy for an undisclosed amount. Choose Energy is an online marketplace for electricity consumers based in San Francisco, California.

PowerMundo
Colorado State University | 2009 Competitor | www.powermundo.com

Based in Fort Collins, Colo., PowerMundo is a clean technology distribution company. It builds and manages a network of international allies, retailers and customers to source, promote, distribute and finance a suite of life-enhancing products. The company’s cleantech products include off grid solar home lighting systems, information and communication technologies, improved cook stoves and water filtration systems.

PowerMundo improves access to solar and other clean technologies to empower people in emerging markets. By sourcing cleantech products, building a rural distribution network, offering financing options and educating consumers about the cleantech products, PowerMundo provides families with the opportunity to redirect their monthly cash expenditures toward cleaner and more efficient energy.
sources to promote health, education, clean environments and economic well-being. PowerMundo addresses access to energy in Peru by providing solar products to rural, off-grid communities.

PowerMundo is scaling up their off-grid technologies with funds from a recent grant from the U.S. Agency for International Development. The Inter-American Development Bank chose PowerMundo as winner in the most recent IDEAS Energy Innovation Contest. Winners of the 2015 Startup Peru Contest, PowerMundo’s goal is to expand its geographical reach to serve customers at the base of the economic pyramid throughout Latin and South America.

**PreDxion Bio**  
*University of Michigan | 2016 Competitor | www.predxionbio.com*

PreDxion is a precision medical diagnostics company seeking to revolutionize critical care and emergency medicine.

Their first product, MicroKine™, measures a patient’s specific, individual immune response by identifying up to six cytokine proteins – proteins that control and direct the body’s response to inflammation – from a single drop of blood, in just 30 minutes. The quick turnaround time allows physicians to treat patients more precisely and more efficiently.

PreDxion was a semifinalist in the 2016 Accelerate Michigan Innovation Competition.

**Prepify**  
*Massachusetts Institute of Technology | 2015 Competitor | prepify.me*

Prepify is making high-end, adaptive, online SAT prep free for students anywhere by charging universities for personal introductions to top admissions candidates on the platform.

Thousands of SAT-takers each year can't afford test prep. Millions write off college altogether, unaware of the big need-based scholarships most top schools offer. And colleges still struggle to recruit more than ten percent of their classes from low-income families.

Poets and Quants included Prepify on their list of favorite MBA startups of 2016. The Austin, Texas-based company was selected as a semi-finalist for the Common Bond Social Impact Award.

**PrepMe**  
*Stanford University | 2005 Competitor | www.prepme.com*

PrepMe was an education company dedicated to bringing high quality, customized learning to students. It launched the first open adaptive learning platform, Coursification. Over the years, the company garnered significant press coverage in publications such as FORTUNE, Small Business Magazine and CNN.com.

In 2011, PrepMe was divided and sold. Its adaptive learning platform for higher education was acquired by the Providence Equity-backed Ascend Learning. PrepMe’s college test prep and adaptive learning platform for grades K–12 was acquired by Naviance in February 2012.
**Pro-Arc Diagnostics**  
*Washington University in St. Louis | 2016 Competitor | http://pro-arcdx.com*

Pro-Arc Diagnostics is a developing next-generation laboratory test for patients at risk of Progressive Multifocal Leukoencephalopathy (PML).

PML is caused by the John Cunningham Virus and is responsible for thousands of deaths each year. To date, doctors have had no way to determine which patients were at risk for developing PML. Pro-Arc’s technology is being designed to identify these patients, which may eventually allow doctors to monitor PML risk and safely design treatment courses in response.

Pro-Arc Diagnostics is headquartered in St. Louis, Missouri. They are supported in part by an Arch Grant and placed third in the 2016 Accelerate St. Louis Challenge.

**Pumani**  
*Formerly InfantAIR | Developed at Rice360 | Rice University | 2010 Competitor |  
www.rice360.rice.edu | www.3rdstonedesign.com/work/pumanibcpap*

The Pumani CPAP (continuous positive airway pressure) device treats babies with respiratory distress syndrome. Developed specifically for use in the developing world by Rice 360° and collaborators Baylor College of Medicine, Texas Children’s Hospital and Queen Elizabeth Central Hospital, the Pumani alleviates infant distress for 1/15th the cost of CPAPs available in the U.S. and has tripled the survival rate of babies affected by RDS.

The Pumani CPAP (formerly the InfantAIR device presented at the 2010 RBPC) continues to combat infant distress syndrome in the developing world. The project is being commercialized by industrial design firm Hadleigh Health Technologies, a subsidiary of 3rd Stone Design. The Pumani is available for purchase by world healthcare organizations and clinicians.

Grant money ensures that every public central and district hospital in Malawi will have access to a Pumani. Funding from GSK and Save the Children is affording the technology’s expansion through Zambia, Tanzania and South Africa. In November 2016, the device was presented at the World Health Organization as part of a discussion of a CPAP rollout across five nations.

In 2014, co-founder and inventor Jocelyn Brown was named in Forbes 30 Under 30 list in Science and Healthcare.
Qcue
The University of Texas at Austin | 2008 Competitor | www.qcue.com

Qcue is the world’s first dynamic pricing engine for live entertainment events. Using a scientific approach to pricing, Qcue combines computational analysis and external data sources to allow organizations to adjust pricing multiple times per day.

Sophisticated algorithms analyze real time sales data and other external factors to generate sales and revenue forecasts based on various price recommendations. Once approved, price changes are automatically pushed to ticketing systems that process the changes at the point of sale and across all channels.

Currently in the midst on an international expansion, Qcue’s existing clients include sports teams, performing arts organizations, venues and promoters around the world, spanning three continents and more than dozen of the world’s premier sports leagues. They intend to release a new product in 2017.

Twice named one of the 10 Most Innovative Companies in Sports and one of the 50 Most Innovative Companies in the World, Qcue has added millions of dollars in revenue annually for its clients. It has been featured in major publications including The New York Times, Forbes, and The Economist Magazine and on National Public Radio. Qcue is headquartered in Austin, Texas.

Quad Technologies
Northeastern University | 2013 Competitor | www.quadtechnologies.com

Quad Technologies LLC is developing novel cell separation and protein purification tools to provide improved purity and recovery while maintaining a native stem cell phenotype. The company is currently building on successful manufacturing and feasibility studies of QuickGel™, its lead, patent-pending technology.

Ultimately, Quad Technologies will develop its chemistry beyond research scale and enable stem cell harvesting tools for clinical applications. Stem cells hold the potential to treat life-treating diseases such as non-Hodgkin’s lymphoma, Parkinson’s and multiple sclerosis, but current harvesting technologies destroy these stem cells in the process. Quad Technologies robust QuickGel chemistry will add value to separation technologies, from viable stem cell harvesting to biologics purification.

In December 2016, the company presented an abstract at the American Society of Hematology’s annual meeting in San Diego, California. Last year, the company launched their MagCloudz™ Streptavidin Cell Separation Kit, the first commercially available product that incorporates their proprietary QuickGel technology. Quad Technologies expects to forge new partnerships to develop their technology and refine applications crucial for regenerative medicine in the coming year. The company secured investment dollars and received a grant from the Center for the Advancement of Science in Space.

Quad Technologies works from their facilities in the North Shore InnoVentures at the Cummings Center in Beverly, Massachusetts.
Quantitative Insights  
*University of Chicago | 2011 Competitor | www.quantinsights.com*

Quantitative Insights, Inc. was formed to realize the clinical and commercial value of QuantX, a computer-aided diagnosis system to aid radiologists in more accurate diagnosis of breast cancer.

Developed in the labs and clinics of the University of Chicago to improve outcomes while significantly reducing costs, QuantX addresses critical needs of clinicians, practice administrators and patients. The company intends to provide the world’s first and only breast imaging decision support system with direct correlation to known pathology. In research settings, QuantX has been shown to increase both the efficiency and accuracy of breast cancer diagnosis.

After the successful completion of their pivotal clinical study, QuantX’s imaging workstation is awaiting clearance from the U.S. Food and Drug Administration. Chicago-based Quantitative Insights is pre-revenue but market ready. Their first sales are expected immediately following clearance from the FDA.

Rebellion Photonics  
*Rice University | 2010 Competitor | www.rebellionphotonics.com*

Rebellion Photonics’ gas cloud imaging (GCI) technology both sees and quantifies gas leaks for all hydrocarbons, like methane, and other dangerous gases, such as hydrogen sulfide. In addition to showing concentration in parts per million, the GCI system can estimate total volume emitted within 10 percent accuracy. This is by far the most useful method for calculating total methane emissions in a real world environment.

Rebellion Photonics offers their GCI service as fixed installations for continuous monitoring of large facilities, such as refineries, or as a truck-mounted monthly monitoring service at smaller sites like well heads or storage tanks. The monthly GCI service is uniquely suited to meet its customer’s goal of lowering methane emissions by wide-scale, cost-effective gas monitoring.

Founder Allison Sawyer was recognized on Forbes’ 2014 list of 30 Under 30 in Energy and Industry. The company was named Startup of the Year by The Wall Street Journal in 2013 and won an R&D 100 award in 2012. In 2015, the company was awarded a grant from the U.S. Department of Energy’s Advanced Research Projects Agency to design a miniature imaging spectrometer for photonic gas monitoring.

Recently featured on CBS News, Rebellion Photonics is expanding its operations and marketing its gas cloud-imaging camera for oil rig and refinery safety, both at home and overseas.

Relish  
*Formerly RelishMBA | University of Virginia | 2015 Competitor | www.RelishCareers.com | www.relishmba.com*

Relish is a technology company that builds cloud-based recruiting software for masters degree hiring markets.

Like match.com for the hiring market, the platform allows job seekers and recruiters to establish, build and manage relationships digitally, ensuring a larger pipeline of opportunities and more substantive and effective in-person interactions. The modular software suite includes highly customizable recruitment marketing pages and candidate profiles, a filtered search, data-driven matching with custom-built algorithms for each employer as well as advanced analytics and benchmarking reports.

The first Relish hiring platform is RelishMBA, the marketplace for MBA hiring. Launched in the summer of 2015, RelishMBA has grown to over 80 top international graduate business schools and has onboarded dozens of employers, from early stage startups to FORTUNE 500 companies.
**reNature**  
*Arizona State University | 2012 Competitor | www.renatureinc.com*

reNature makes biostimulants and soil amendments. They partner with local food banks to rescue food otherwise headed for the landfill. Their advanced microbial bioreactors rapidly digest vegetable waste to help reconnect food with its roots.

The company’s distributed technology reduces landfill environmental management costs. It utilizes organic waste that bio-mass energy and fuel plants do not want to handle and that are a liability for industrial customers, even after it is sent away.

A fourth quarter 2017 pilot on Arizona golf courses validated a new use of reNature’s product. Not only does it significantly improve biodiversity, but it also reduces the saline levels in soil up to 66 percent. reNature intends to market their product for saline reduction in the Phoenix area in early 2017. reNature was a 2013 Mass Challenge finalist and received funding from the National Collegiate Inventors and Innovators Alliance (now VentureWell).

**Reveal Design Automation**  
*University of Michigan | 2010 Competitor | http://reveal-da.com*

Reveal Design Automation is an electronic design automation startup developing software tools and technologies for verification of complex semiconductor designs.

With fully automated solutions enabling highly scalable architecture validation, formal verification runs that take days with competing solutions can now be completed in hours with Reveal. Where a typical verification cycle for a new chip design requires dozens to hundreds of such verification runs, Reveal can save chip designers millions of dollars in verification expense, reduce time-to-market by months, and significantly improve confidence in chip design correctness.

Based in Ann Arbor, Michigan, Reveal is currently a member of the University of Michigan’s Venture Accelerator and a recent recipient of investment money from Ann Arbor SPARK and the Zell Lurie Commercialization Fund. With the influx of funds, the company will continue developing its technology in order to raise a Series A in the next couple years. Reveal was a finalist at the 2010 Rice Business Plan Competition.

**Rotex**  
*Formerly Guardian Sensors | The University of Texas at Austin | 2015 Competitor | www.rotextech.com*

Rotex Inc. is developing electronic tattoos, which are the thinnest, softest and lightest biometric sensors ever invented.

The tattoo is built using a pliable mesh of nanoribbons instead of ordinary wires. The circuits are printed onto a layer of silicone that stays on the skin for about a week. It measures the wearer’s vital signs or translates small muscle movements into commands for controlling devices. The tattoo sends precise biometric readings to a sensor box connected via Bluetooth.

In 2016, the team finalized the scaled production of the tattoo. The tattoo was featured by CTA (Consumer Technology Association) as one of the coolest technologies at CES2017, and the MIT Technology Review named founder Nanshu Lu to its list of 35 Innovators Under 35. Rotex is headquartered in Austin, Texas.
Sanergy
Babson College and Massachusetts Institute of Technology | 2010 Competitor | http://saner.gy

To combat the lack of sanitation in the ever-expanding slums of Nairobi, Kenya, Sanergy is developing a comprehensive sanitation infrastructure that has significant environmental, health, economic and social impact.

Sanergy franchises high quality, low-cost toilets to local entrepreneurs. It creates an efficient, equitable, and sustainable sanitation cycle by building a dense network of small-scale sanitation centers across the slums, providing a low-cost containerized waste collection infrastructure, and converting this waste at its central processing facility into electricity, fertilizer and other high margin products.

Through its network of over 250 operators, Sanergy has opened 932 Fresh Life Toilets facilities. Its waste collectors pick up about 50 tons of waste each week with no spills and a perfect daily collection record. The solid waste is converted into a nutrient rich organic fertilizer, lab-tested and approved for mineral content and safety levels. The liquid waste is sold to coffee farms as a high-nitrate fertilizer.

Sanergy continues to win awards and recognition for its work and recently attracted additional funding to increase fertilizer production in Kenya. It was a winner of the U.S. Agency for International Development competition for development ideas, co-funded by the Bill & Melinda Gates Foundation and the U.S. Agency for International Development. The Lemelson Foundation awarded Sanergy its inaugural Sustainable Practice Impact Award; the award was given by the National Collegiate Inventors and Innovators Alliance (NCIIA) and funded Lemelson. Additionally, Sanergy made Fast Company’s list of Most Innovative Companies dedicated to social good.

The company has received global media attention from Forbes, Voice of America, BusinessWeek and Scientific American.

Saranas
Rice University | 2013 Competitor | www.saranas.com

Saranas, Inc. is a medical device company. They improve patient outcomes through early detection of complications from internal bleeding.

The company’s patented technology allows for the rapid detection of these complications and enables physicians to mitigate the downstream consequences by addressing the complication immediately, using accepted, straightforward adjustments to the flow of the procedure.

The system is composed of a standard cardiac sheath that is surrounded by an array of electrodes. These electrodes measure the difference in electrical resistance across the blood vessel. When a blood vessel is ruptured, blood begins to accumulate outside of the vessel, causing a change in the electrical resistance. The Saranas system is sensitive enough to detect as little as 30 milliliters of blood accumulation.

First place winners of the 2013 Goradia Innovation Prize, Saranas closed on a new round of funding and was featured in Xconomy. They partner with the industrial design firm Cambridge Consultants to help develop their product. The company is based in Houston, Texas.
Scan
Formerly QR Code City | Brigham Young University | 2011 Competitor

Founded in 2011, Scan created web and mobile experiences and tools that enabled both enterprises and individuals to benefit from mobile transaction technologies (QR codes, NFC and more). These benefits included mobile web pages, mobile commerce, social media, lead generation and analytics.

In late 2014, Scan was acquired by SnapChat, a social media company based in Venice, California.

Seismos
The University of Texas | 2013 Competitor | http://seismos.com

Headquartered in Austin, Texas, Seismos is a technology provider for the oil and gas industry offering real-time, subsurface fluid-flow imaging. They enable operators to achieve sustainable production uplifts through cost-effective, scalable, software platforms and cloud based field instrumentation that power real-time data driven actions.

Released in January 2016, Seismos K-View Frac™ platform monitors and analyzes continuous and active data during hydraulic fracturing. They provide operators with various parameters related to stage performance. The platform consists of single smart instrument mounted directly on frac tree and connected to a cloud-based data processing platform.

In addition to its proprietary, developed technologies and software, Seismos has an exclusive technology licensing agreement with the Lawrence Berkeley National Laboratory for all applications of its K-wave and related patent portfolio.

Following its win of the Shell Technology Ventures Award at the 2013 Rice Business Plan Competition, Seismos won first place in the Energy/Cleantech division at the UC Berkeley Startup Competition and the Energy/Cleantech Wells Fargo Award at the Global Venture Labs Investment Competition in Austin. They recently presented their technology at URTeC 2016 in San Antonio, Texas.

Semprus BioSciences
Formerly SteriCoat | Massachusetts Institute of Technology | 2007 Competitor

Semprus Biosciences was a venture-backed biomedical company designing new tools to prevent infection and thrombus-related complications in patients with implanted medical devices. Semprus Sustain™ Technology is a permanent, nonleaching, biomaterial modification that chemically bonds to the surface of the implant device. The technology vastly improved patient outcomes by preventing serious medical complications such as infection, blood clots, improper healing and cell overgrowth.

SensorHound
Purdue University | 2013 Competitor | www.sensorhound.com

SensorHound™ has developed Internet of Things (IoT) specific operations monitoring software that is proactive, automated, and systematic. Their suite of software products provides continuous in situ deployment monitoring and sends immediate alerts with detailed diagnostic information when software failures or security intrusions are detected. Based on patent-pending technology developed by leading IoT researchers, SensorHound’s award-winning solutions are proactive, automated, and easy to integrate — all with an unbelievably small footprint. Their breakthrough solution can significantly reduce the operational and maintenance costs of IoT deployments.

Products include SensorTracer™ for real time detection of software failures and intrusions, SensorCloud™, a cloud-based dashboard for monitoring deployments, and SensorDoctor™, a forensic tool for source code diagnostics on each individual node.

Since their launch, they have received awards from the National Science Foundation, Purdue Research Foundation, The Alchemist Accelerator, Founder.org, and TiE. SensorHound has offices in West Lafayette, Indiana and Santa Clara, California.

Sensytec
University of Houston | 2016 Competitor | www.sensytec.com

Sensytec’s technology allows users to monitor the exact status their cement in real-time throughout the operational lifetime of their structures. They can pinpoint the exact location of pressures, cracks, damage, contamination and corrosion in their self-sensing concrete.

Currently, there are no other technologies that detect the structural integrity of cement in real-time over the operational lifetime of concrete structures. With smart cement, it is now possible to monitor various properties of cement structures for the full lifetime of any project. By gathering and delivering data on these properties, Sensytec can ultimately prevent potentially catastrophic cement failures in any structure.

Sensytec showcased their technology at the 2016 Offshore Technology Conference and is partnering with Baker Hughes.

Simprint Nanotechnologies
Massachusetts Institute of Technology | 2009 Competitor | www.simprintnanotech.com

Simprint Nanotechnologies Ltd. provides software tools and simulation services to users of nanoimprint lithography (NIL). The company offers an extremely fast way of simulating the nanoscale transformation of material involved in NIL. Its software allows semiconductor, photonics and data-storage manufacturers to use nanoimprint reliably and with greatly reduced development costs. Simprint software helps users to build intuition about the physics of the nanoimprint process, making it invaluable in nanoimprint lithography research.

Simprint released their most recent product in April 2016. The Multscale prints with higher degree of detail than Simprints’ other products.

The simulation techniques received the 2009 Software in Design Innovation Award from the Institution of Engineering and Technology. Simprint Nanotechnologies is based in Bristol, England.
SiNode Systems
Northwestern University | 2013 Competitor | http://sinodesystems.com

SiNode Systems develops advanced materials for the battery industry to enable longer lasting, faster charging batteries.

The Chicago-based company builds silicon-graphene anodes for the next generation of lithium-ion batteries. SiNode anodes offer higher battery capacity and faster charging rates, all while being produced via a low-cost solution, chemistry-based manufacturing process. SiNode seeks to change the landscape for lithium-ion batteries so they can meet the demands of a wide range of industries, from consumer electronics to electric vehicles.

Co-founder Cary Hayner was named as one of Forbes’ 2016 30 Under 30 in Energy. His co-founder and company CEO, Samir Mayekar was listed as one of Midwest Energy News’ 40 under 40. SiNode is the recipient of a 2013 U.S. Department of Energy Small Business Innovation Research Phase II grant and won first place in both the 2013 Rice Business Plan Competition and the 2013 U.S. Department of Energy Business Plan Competition.

In summer of 2016, the U.S. Advanced Battery Consortium LLC (USABC), a group comprised of auto giants Ford, Chrysler and General Motors, awarded a major contract to SiNode. It will fund 30 months of work advancing and adapting the anode material for vehicle applications. The DOE will cover half of the funding for this project. SiNode also received a Small Business Voucher award for a joint project with the Argonne National Laboratory. Most recently, VentureWell choose SiNode to win the 2017 Sustainable Practice Impact Award in March.

SiNode is located in the University Technology Park at the Illinois Institute of Technology in Chicago, Illinois.

SioTeX Corporation
Texas State University | 2014 Competitor | www.sio-tex.com

SioTeX® is a silica manufacturer, developing a drop-in replacement for fumed silica called Eco-Sil™. Their patent-pending technology uses rice hulls, an abundant biowaste, as the raw material. The process is much simpler than the conventional method, consumes substantially less energy and involves no toxic reactants. Target markets include paints, plastics and tires. Eco-Sil is also generally recognized as safe by the U.S. Food and Drug Administration and contains no heavy metals.

The company’s technology won an Environmental Protection Agency award for its ability to reduce rice hull landfilling and field burning. SioTex is headquartered in San Marcos, Texas.

Skylark Wireless
Rice University | 2016 Competitor | www.skylarkwireless.com

Skylark Wireless is a wireless equipment and systems engineering company. They specialize in software-defined radio and massive-MIMO (large-scale antenna systems) beam-forming. The company develops rural broadband solutions to connect the next billion people with high-speed internet service. Skylark’s proprietary base station is able to provide high-speed, multi-user data links over tens of miles wirelessly using the Massive-MIMO technologies first developed and demonstrated at Rice University.

Since competing in the 2016 RBPC, Skylark received a Small Business Innovation Research Phase II grant from the National Science Foundation. The grant will fund a full-scale pilot demonstration of their beam-forming system. They filed two IPC (inter-process communication) patent applications as well a provisional patent. The company, based in Houston, Texas, recently hired a full-time embedded systems engineer and is searching for second full-time embedded software engineer.
SmarterShade
University of Notre Dame | 2011 Competitor

SmarterShade was a cleantech research company developing new technology for smart glass. Smart glass is an emerging class of clean technologies that uses stable polarizing and retarding films to electronically tint a clear window with the flip of a switch. They places fifth overall at the 2011 Rice Business Plan Competition.

SmarterShade presented their technology at the White House in June 2015, and the company was chosen as a finalist for the Chicago Innovation Awards. In January 2016, Forbes recognized co-founder Will McLeod as one of their 30 Under 30 in Manufacturing and Industry.

In July 2015, SmarterShade’s key human resources and assets were acquired by VG SmartGlass. VG SmartGlass was founded in 2014 specifically to commercialize the technology from SmarterShade Inc.

Soko
Formerly SasaAfrica | Massachusetts Institute of Technology | 2012 Competitor |
http://shop.soko.com

Soko is an innovation in global fashion and technology, an online store that connects online consumers to global makers and handcrafted jewelry from the developing world. With Soko, people can discover incredible design and creative ingenuity originating in communities outside of the digital economy. Soko delivers exceptional style with stunning handcrafted jewelry designs created by artisans in emerging economies, using natural and upcycled materials.

Soko was created by women for women to help “fashion a better world” through the equitable direct trade of beautiful goods between artisans in the developing world and web consumers worldwide. Working in the bottom of the pyramid communities around the world, the founders realized that by leveraging technology and existing infrastructure in an innovative way, they could create a platform to enable any talented artisan to participate in international trade.

The Soko solution transforms the mobile phone into a tool that expands access to economic opportunity for artisans in underserved communities. This new technology revolutionizes international trade by using technology facilitation to cut out the traditional middlemen, reducing logistical costs and increasing profits for artisans.

Soko recently opened their first brick and mortar store San Francisco. Their jewelry is also available at major retailers such as Nordstroms and Anthropologie and can also be purchased on their website. Co-founder Catherine Mahugu is on Forbes’ 2016 list of 30 Under 30 in Social Entrepreneurship and was one of Forbes’ 30 Most Promising Entrepreneurs in Africa 2015. The company partners with the United Nations Trust Fund to end violence against women. They are one of the 10 global ventures selected to participate in the inaugural Girl Effect Accelerator. Soko has offices in Nairobi, Kenya and New York City.
**SolidEnergy Systems**  
*Massachusetts Institute of Technology | 2012 Competitor | http://solidenergysystems.com*

SolidEnergy revolutionized portable energy storage with the introduction of the “anode-free” lithium metal battery in 2014.

The company’s two material platforms: dual-layer electrolyte and ultra-thin lithium metal anode, provide transformational energy density and safety across all rechargeable lithium batteries and can be seamlessly integrated into existing Li-ion manufacturing capability. The final applications include drones, watches and wearables, smart phones and electric cars. The technology will be ready for smartphones and wearables in 2017 and for electric cars in 2018.

Founder Qichao Hu was named to the 2012 Forbes’ list of 30 Under 30 in Energy. The company just closed a Series B funding round led by a major U.S. automaker. SolidEnergy placed fourth in the 2012 Rice Business Plan Competition and was a finalist in the U.S. Department of Energy's National Clean Energy Business Plan Competition. Based in Waltham, Massachusetts, Solid Energy is part of the Route 128 Innovation District.

**Soltage**  
*Yale University | 2006 Competitor | www.soltage.com*

Jersey City, New Jersey-based Soltage is a full-service renewable energy company developing, financing, installing, owning and operating solar power generation assets that provide electricity to commercial and industrial, educational, utility and municipal customers. The company owns and operates more than 85megawatts of generation capacity across eight states. They have deployed over $250 million since 2006, with notable investors including corporate and project investments from leading independent power producer Tenaska.

Co-founders Vanessa Stewart and Jesse Grossman were finalists for Ernst & Young Entrepreneur of the Year, New Jersey in 2011.

In addition to providing funding, Tenaska acquired a controlling interest in Soltage. Tenaska, a leading independent power producer, is based in Omaha, Nebraska. Forbes lists Tenaska as one of the 25 largest, privately held companies in the United States.

**Sonikure Technology**  
*The Hong Kong University of Science, Hong Kong | 2015 Competitor | www.sonikure.com*

Sonikure Technology Ltd is a Hong Kong-based medical device startup. They are developing and commercializing an ultrasound-based drug delivery system for treating eye diseases.

In 2016, Sonikure closed a seed round to support further research and product development. They are conducting first-in-human trials for their CE Mark approval process. The company holds one U.S. patent, and their technology was featured in Google Solve for X.

They were selected as Top 50 global startup by the Kairos Society and won the 2016 IET Innovation Award in Healthcare. Funded by university and government grants, Sonikure is headquartered in Hong Kong.
Spogen Biotech (dba Elemental Enzymes)
University of Missouri | 2012 Competitor | www.elementalenzymes.com

Elemental Enzymes is a life sciences company focused on generating cutting edge solutions, ranging from organic solutions to biotechnological advances.

They use newly patented technologies and the latest scientific advancements to assist our customers in overcoming their challenges or creating new market opportunities. Through the use of their patented VersaShield® stabilization platform and other scientific breakthroughs, they develop biological products, stabilized enzymes, proteins, peptides and specialty chemicals that can address key market needs. Elemental Enzymes strives to bring new innovative ideas to market through its partnerships and is open to developing Elemental solutions for their customers.

The Elemental Enzyme founders have two companies: Spogen Biotech, dba Elemental Enzymes, and its subsidiary, Elemental Enzymes Ag&Turf. The company has a research partnership with Bayer CropScience, a top crop science company. Elemental Enzymes is based in Columbia, Missouri.

SPOUTS of Water
Harvard University | 2014 Competitor | www.spoutsofwater.org

SPOUTS of Water manufactures affordable and effective ceramic water filters to provide clean drinking water access to the East African community. SPOUTS (Sustainable Point-Of-Use Treatment and Storage) of Water seeks to economically empower local citizens, engage the surrounding communities and provide cost-effective water treatment systems, all in an effort to alleviate the plethora of issues caused by a lack of clean drinking water.

SPOUTS is currently expanding their production plant in Uganda to have the capacity to produce more than 10,000 filters per month. They have provided clean drinking water to more than 90,000 people to date and are excited to help with the support of many partner organizations. In the last months of 2016, SPOUTS received Stage I funding through the U.S. Agency for International Development.

Featured on NBC News, SPOUTS of Water was runner-up for the President’s Challenge Honorable Mention, for the McKinley Family Grant for Innovation and Entrepreneurial Leadership, honored with the 2016 SWITCH Africa Green-SEED Award and participated in the Unreasonable Institute East Africa.

Sproxil
Formerly mPedigree Logistics | Dartmouth College | 2009 Competitor | www.sproxil.com

Sproxil® is a venture-backed enterprise that provides world-class brand protection services in emerging markets. The company’s Mobile Product Authentication™ (MPA) solution helps ensure purchased goods are not stolen or counterfeit by allowing consumers to verify product genuineness within seconds through a text message. Compatible with any tangible item, MPA is widely used by leading pharmaceutical companies to curb the multibillion dollar counterfeit drug industry. Sproxil has also expanded into nonpharmaceutical industries including automotive, agribusiness, and fast moving consumer goods. The company has exceeded 50 million engagements to date.

Founder and CEO Ashifi Gogo is listed on FORTUNE’s 2015 list of 40 Under 40. Sproxil received the U.S. Patent and Trademark Office’ Humanity Award in Information Technology. The company ranked number one in healthcare and number seven overall in Fast Company Magazine’s World’s 50 Most Innovative Companies. They won the 2009 Clinton Global Initiative Outstanding Commitment Award and received regulatory endorsements in Nigeria and Kenya.

Headquartered in Cambridge, Massachusetts, Sproxil continues to expand across Asia and Africa.
Stasis Labs
University of Southern California | 2015 Competitor | www.stasislabs.com

Stasis Labs offers a cloud-connected, vital sign monitoring system to drive low-cost hospital innovation. They target emerging market hospitals through their custom vitals monitor, tablet application and cloud backend. The company’s technology ensures caregivers always know the status of their patients’ health.

On the heels of a recent round of venture funding, Stasis Labs will make their initial product launch in India where the barriers to market are less challenging than those in the United States. The company will use the capital to get clearance from the U.S. Food and Drug Administration, increase their manufacturing capacity and expand deployment in India.

Headquartered in Los Angeles, California, Stasis Labs was chosen as one of Inc. Magazine’s Coolest College Startups of 2015. The company incubated in the TechStars Healthcare Accelerator at Cedars-Sinai.

Surgical Innovation Associates
Formerly SurgiNet | Northwestern University | 2016 Competitor

Surgical Innovation Associates (SIA) is a medical device company rooted in Northwestern Kellogg School of Management and Feinberg School of Medicine. They produce bioabsorbable scaffolds for general and plastic surgery. The company’s introductory product, Polydioxanone Tissue Matrix, is an absorbable mesh for breast surgery, hernia repair and a variety of other applications.

SIA is currently in pre-clinical trials. They tied for first at the Northwestern Venture Challenge in 2016.

Takachar
Massachusetts Institute of Technology | 2013 Competitor | http://takachar.strikingly.com

Takachar is a for-profit company that represents a process and distribution model to produce and sell low-cost biomass-derived solid fuel in remote areas.

Currently, most of the biomass waste (farm/agricultural) that exists in remote areas cannot be economically converted into useful commodities. As a result, most farmers simply burn the post-harvest biomass waste in open air because there is little economic value in it. Takachar has developed a low-cost, decentralized, and patent-pending system that is able to economically convert the biomass waste on-site, cut down the transportation and processing costs and bring the fuel to those who are willing to pay.

Takachar was a 2013 MIT Clean Energy Semi-Finalist. Its co-founder, Sophi Ni, was named one of Forbes’ 30 Under 30 in Energy and Industry for 2014. The company launched a new website in January 2015 and published a report on a Lagos, Nigeria waste-to-energy project.
Taxcient
Formerly vAudit Group | San Diego State University | 2004 Competitor

In business for six years, Taxcient was a sales and use tax compliance software provider. The company was founded with the intent of relieving corporate tax departments of the time consuming and costly effort required to report sales and use tax across multiple jurisdictions. Designed by former state tax auditors, the software provided an alternative to the administrative burden of state and local tax compliance. The software was trusted by some of the leading companies in the world to provide accurate sales tax compliance with minimal cost.

In 2010, Taxcient merged with Avalara, the leading provider of web-based sales tax automation. The merger marked a major milestone in the companies’ common quest to revolutionize the sales and use tax management industry via the application of leading-edge technology and top-flight tax knowledge and expertise.

Tembo Education
The University of Tampa | 2016 Competitor | www.TemboEducationGroup.com

Based in Tampa, Florida, Tembo educates 0-6 year old children in slums around the world, via mobile phones.

Their solution uses a high-quality, evidence-based curriculum to train and certify home educators (members of the urban slum community) to teach parents via SMS text messages. The parents then can educate their children in their own homes. Tembo assesses the learning process through a quiz via SMS text. For educating their children and answering the quiz correctly, the parent is rewarded with free airtime (minutes and texts).

The company facilitates and expedites the economic development of the country by not only educating millions of children, but also by creating job opportunities, generating revenue for the telecoms and opening the doors to foreign investors.

Since competing at Rice, they won first place at Babson’s pitch competition and won funding from a stint in the MassChallenge Accelerator. Tembo was one of 100 companies selected to attend Stanford’s Global Entrepreneurship Summit hosted by President Obama, but they were only one of five businesses invited to pitch. Tembo concentrates its efforts in sub-Saharan Africa. They began in Nigeria but are planning to launch in a new country soon.

The Eye Tribe
Formerly Senseye | University of Copenhagen | 2012 Competitor | theeyetribe.com

The Eye Tribe is an award-winning innovator of eye tracking technology and an OEM (original equipment manufacturer) technology partner that delivers fast, affordable solutions for integrating eye tracking into Virtual Reality/Augmented Reality smartphones, tablets, computers, automotive, TV, entertainment and gaming devices.

The Eye Tribe software enables touchless interaction and control of consumer devices, eye-based authentication and visual attention analytics. The Eye Tribe’s software is unique, because it relies only on low cost components. They combine their proprietary software with OEM hardware, using only standard components that can be integrated into the next generation of consumer devices.

Based in Denmark, The Eye Tribe was founded in 2011 and received many awards for its technology innovations, including five Innovation Awards at the Consumer Electronics Show and being a finalist in Sir Richard Branson’s Extreme Tech Challenge 2015.

The Eye Tribe was acquired by Oculus in December 2016. Oculus is owned by Facebook.
RBPC Success Stories

TheraBracelet
University of Louisville | 2014 Competitor | www.therabracelet.com

TheraBracelet is an early stage startup in the wearables industry. IGNITE is the only wearable platform that actively enhances physical performance.

The technology will transform the current landscape of a passive, sensor-driven, wearables industry through the company’s groundbreaking platform technology that actively enhances a user’s physical performance. IGNITE incorporates a neuroscience-based and patent-pending vibration technology to instantaneously improve reaction times, motor skills, strength and sensitivity in the hands. The company is based in Louisville, Kentucky.

TheraBracelet recently filed a National Institutes of Health Small Business Technology Transfer grant application. The team is based in Louisville, Kentucky.

TheraNova
Duke University | 2003 Competitor | www.theranova.com

Located in San Francisco, California, TheraNova is an experienced medical device developer with a track record of creating innovative and practical solutions to large markets with unmet needs. In their incubator, TheraNova pursues a rapid, highly capital-efficient process incorporating all the needed elements of medical device development in a shared services model.

Their technologies include an endoscopic obesity therapy, an implantable shunt to remove chronic abdominal fluid, and a noninvasive incontinence therapy. TheraNova also supports external projects through traditional research and development. The company has successfully spun out or seed-funded several venture capital-backed companies including BAROnova, Sequana (formerly known as Novashunt), Velomedix, Channel Medsystems, Portrero Medical and EMKinetics.

All of TheraNova’s technologies have a common element: each was designed based on the observation of a definitive need identified by one of the founders through clinical practice. Once the need has been defined, TheraNova works to develop proprietary technologies to fill that need. The resulting technology is either licensed or becomes the centerpiece for a viable spinout.

In 2014, founder Daniel Burnett was recognized as Emerging Medical Technologies Innovator of the Month in a report from Life Science Intelligence.

TiFiber
University of Arkansas | 2011 Competitor | www.tifiber.com

TiFiber™ is developing and selling new, high performance materials and products to control dangerous or detrimental microorganisms including a biocompatible, broad spectrum, antimicrobial additive for the replacement of triclosan, nanosilver and other currently available antimicrobial agents.

Initial applications are for personal care products, wound care dressings, medical devices and textiles. Additional applications revolve around ceramic nanofiber technologies including robust Titanium Dioxide nanofiber membranes for applications in filtration and lightweight thermal media.

In 2013, the company expanded its intellectual property foundation by licensing an additional technology, a family of synthetic antimicrobial polymers, originally developed at the University of Auckland in New Zealand. TiFiber was a finalist at the 2011 Rice Business Plan Competition. It is a Virtual Incubation Company portfolio company based in Arkansas.
TITIN Tech
Georgia Institute of Technology | 2011 Competitor | www.titintech.com

TITIN is an innovative apparel company focusing on the science of sports and fitness. TITIN’s Force system is the world’s first full body weight and recovery suit. Force gear is patented weighted and recovery compression apparel.

In October 2014, TITIN founder Patrick Whaley struck a deal with Daymond John after pitching his business on Shark Tank. Recently, John said he considers TITIN Tech is one his two best investments.

Founder Patrick Whaley was chosen in March 2016 to receive the AATCC Young Entrepreneur Award. TITIN Tech gear is used by the U.S. Navy SEAL team and athletes from the NCAA, NFL, NBA, MLB and the PGA. CNN named TITIN the Next Big Thing. The company and their products have been featured in national and international media. TITIN is headquartered in Alpharetta, Georgia.

TNG Pharmaceuticals
University of Louisville | 2011 Competitor

TNG Pharmaceuticals is focused on the research and development of its patented vaccine, FlyVax. FlyVax is a revolutionary veterinary vaccine that is expected to inhibit the horn fly’s ability to effectively feed on cattle. FlyVax counteracts the horn fly’s anti-clotting agent, Thrombostasin, by triggering an immune response that clots the blood at the point of the wound. The horn fly’s inability to feed thus directly affects reproduction capabilities, leading to the potential systematic eradication of horn fly populations. Smaller horn fly populations can directly translate into lower infestations per cow, which leads to less stress, more weight and more milk yield.

Currently, the company is working on the development side of their vaccine and navigating the waters of the USDA. TNG Pharmaceuticals won first place at the 2011 Rice Business Plan Competition. They have been featured in articles published by FORTUNE and The Wall Street Journal. TNG Pharmaceuticals is based in Louisville.

Traycer Systems
Formerly Traycer Diagnostic Systems | The Ohio State University | 2008 Competitor | www.trayer.com

Traycer Systems, Inc. develops and commercializes cost-effective, real-time components and systems for the growing terahertz imaging market.

Since 2008, the company has been exploiting the terahertz frequency spectrum for broad commercial applications with a patent-pending, breakthrough imaging capability that has resulted in the only THz camera currently capable of reliable, cost-effective application development. The system delivers significantly improved detection and accuracy characteristics that allow users to capture more critical information, thereby moving imaging capability from simple detection to diagnosis and complete analysis. Traycer expects to build on this unique and superior performance to become the standard for THz imaging systems.

Traycer Diagnostic Systems, Inc. is a spinout from Ohio State University and the University of Notre Dame. It has received funding from Phoenix Venture Partners, TechColumbus, Ohio Tech Angels and the U.S. Department of Defense. The company is located in Columbus, Ohio.
TriBoTEX
Washington State University | 2015 Competitor | www.tribotex.com

TriBoTEX is a startup commercializing nanotechnology for lubricants.

Founded in Pullman, Washington, TriBoTEX offers a clean alternative to currently available lubricating blends. It improves mechanical output by utilizing a self-assembling, nanostructured coating to simultaneously reverse wear while enhancing lubrication. Having achieved traction through various business plan competitions and obtained funding from various institutions including the National Science Foundation, TriBoTEX has grown to develop a working prototype that is primed for commercialization and is currently pursuing further funding in order to produce products at a volume that will allow for sustained growth and continued success among target markets. With a broad range of applications, TriBoTEX’s thin film-forming lubricating blends offer the highest potential value to the automotive and wind power industries.

TriBoTEX began a Kickstarter campaign in February 2017. They plan to deliver first batch of lubricants shipped to backers the following month. Additional funding comes from NSF Small Business Innovation Research Phase I and Phase II grants.

TriFusion Devices
Texas A&M University | 2016 Competitor

TriFusion fabricates custom 3D printed prosthetic and orthotic devices for the biomedical device industry, healthcare, military and commercial manufacturing industries.

They recently formed an exclusive partnership with a Silicon Valley 3D scanning company, allowing them to focus on printing and with Baylor College of Medicine, who is performing clinical trials on TriFusion’s devices. TriFusion secured their first IRB approval and sold over 50 devices in the first month and a half of product sales. They expect to sell more than 3,000 devices in their first year, 2017. Rotary International has selected TriFusion to help deliver 3D printed prosthetic devices to clinics overseas. The company expects to deliver the first devices to a clinic in Tanzania before the end of 2017.

Rather than using a single, large format 3D printer, TriFusion pivoted and purchased five 3D printers. Additionally, they are expanding their product offerings to include custom, 3D printed orthotics. Beta testing for those devices starts in February 2017. They won first place at the 2016 Rice Business Plan Competition.

In October 2016, Essentium Materials acquired TriFusion. Essentium competed in the 2010 RBPC as Whole Tree. They are headquartered in College Station, Texas.
Tympanogen
Tulane University | 2014 Competitor | www.tympanogen.com

Tympanogen, Inc. is a medical device company. They are commercializing a gel patch for repairing chronic eardrum perforations without the need for surgery.

If left untreated, eardrum perforations may lead to recurrent infection, hearing loss, nerve and brain damage. Current therapies require invasive surgeries with potentially low success rates. Tympanogen’s patent-pending gel patch product, called Perf-Fix™, is in-clinic procedure that will promote tissue growth and prevent infection. The patch can treat combat wounds or damage caused by tubes used to treat middle ear infections.

Tympanogen’s device is lining up for a spot in the U.S. National Laboratory aboard the International Space Station. Microgravity reduces fluid motion, allowing for a more precise study of how the antimicrobial gel will be released from the ear patch.

Tympanogen received a grant from Virginia’s Commonwealth Research Commercialization Fund. Perf-Fix is still in development and is not for sale. The company is headquartered in Norfolk, Virginia.

US Chia
Formerly Kentucky Chia | University of Louisville | 2012 Competitor | http://uschia.com

US Chia is an agricultural startup based in Louisville, Ky. Chia seeds are rich in fiber, antioxidants and protein. With the highest concentration of plant-derived omega-3s, chia seeds are instrumental in preventing colic and laminitis, the two leading causes of premature death among horses. The company was recognized in The Wall Street Journal.

Founded in 2011, US Chia is headquartered in Louisville.

Veran Medical Technologies
Vanderbilt University | 2003 and 2004 Competitor | www.veranmedical.com

Veran Medical Technologies is a privately held medical device company, headquartered in St. Louis, Missouri. The company has developed and commercialized a unique SPIN Thoracic Navigation System, which includes a hybrid lung cancer diagnostic procedure called SPINPerc. SPINPerc combines two main platforms: navigational bronchoscopy and percutaneous navigation to give physicians more tools in a single procedure to diagnose early stage lung cancer.

Another funding round in late 2016 will be used to boost commercialization and innovation of Veran’s SPIN Thoracic Navigation System™ technology platform. The company was recently awarded two U.S patents that protect their 4D respiratory tracking and expects that their lung navigation and biopsy technology will compete with Medtronic’s.

Veran Medical Technologies placed third in the 2003 Rice Business Plan Competition.
Veritas Medical
The University of Utah | 2015 Competitor | www.lightlinemedical.com

Hospital-acquired infections are one of the most serious and preventable complications that face health care today.
Veritas Medical, LLC was formed in 2012 with the goal to make a positive impact in health care quality and safety with regards to these infections.

They have developed a novel antimicrobial technology that actively disinfects catheters and other medical devices while residing within a patient’s body. This technology can be translated into many health care applications and environments including the prevention of blood stream and urinary tract related catheter infections, ventilator associated pneumonia and infections associated with wound and surgical sites. Veritas Medical believes that nosocomial infections are completely preventable and hope that through implementation of their technology, they can save millions of lives and billions of health care dollars.

Veritas Medical is starting their Phase I clinical trials in June 2016. They won fourth place at the 2015 Rice Business Plan Competition.

VivImmune
University of Arkansas | 2016 Competitor | www.vivimmune.com

VivImmune is a biotech company focused on engineering effective delivery strategies for cancer immunotherapies. The company’s localized delivery systems save lives by teaching the immune system to eradicate cancerous tumors and prevent their recurrence.

Although VivImmune won some capital on the business plan circuit in the spring of 2016, they have not yet launched. The company is based in Fayetteville, Arkansas.

WAVVE Steam
University of Houston | 2014 Competitor | www.wavvestream.com

WAVVE Stream Inc. produces a replaceable water filter cartridge for pregnant women in the U.S.

They produce patented technologies that significantly enhance contaminant removal capabilities for existing water filtration membranes and systems. The unique properties enable existing water filtration systems to simultaneously remove various contaminants such as bacteria, heavy metals, chemicals and volatile organic compounds from the water. WAVVE's technology is applicable for the wastewater, household, agriculture, and oil and gas industries.

The company produces two different products based on similar nanotechnology components. The materials are non-toxic to human cells. First is a liquid coating solution for smaller scale that can be applied to different types of filter membranes including ceramic, nylon, cellulose nitrate and glass fiber. The company also provides beads for larger scale application that can easily be integrated to different water purification filters, small or large.

Headquartered in Houston, the company has been featured on PBS, Houston Public Media and KHOU11. Working to raise a seed round, WAVVE has just won the Brew Corporate contest held by the Wisconsin Economic Development Council and The Water Council of Milwaukee. The Brew is the Water Council’s business accelerator.

WAVVE sent their first MVP (minimum viable product) to potential customers in February 2017.
RBPC Success Stories

Waygo
Formerly Translate Abroad | University of Illinois at Urbana-Champaign | 2010 Competitor | waygoapp.com

Waygo is a translation app that is changing the way expats, tourists and business travelers experience Asia and pictorial languages.

Utilizing a combination of Optical Character Recognition and machine translation, Waygo translates Chinese, Japanese & Korean characters into English text by seeing images, finding the relevant text, and finally creating sensible phrases. Waygo does not require an internet connection to operate. Companies that enter the field of OCR spend many years getting their solution to work, let alone be any good. We are no different. Our team has been working on our in-house, proprietary algorithms for about two years and it has paid off. When benchmarked against ABBYY (the top commercial OCR) our software is five times faster, two times more accurate, and a tenth of the file size.

In September 2016, the team demonstrated technology at AWE (Augmented World Expo) conference in Santa Clara, California. It has received media attention from Tech Crunch, GigaOM, and Forbes. Currently, Translate Abroad is part of the 500 Startups Accelerator located in Mountain View, California.

WiPower
Massachusetts Institute of Technology | 2007 Competitor

During its four years in business, WiPower Inc. was widely recognized as the technology leader in the wireless power marketplace. The company developed and commercialized the world’s first wireless charging systems capable of extended range charging, insensitive to the position and orientation of receiving devices relative to a charging station. They distributed its commercial and industrial product solutions across the United States and in Japan. WiPower filed 17 U.S. patents related to wireless power technology and counted numerous FORTUNE 500 companies among its customers.

In 2010, WiPower was acquired by Qualcomm for an undisclosed amount.

WISE Systems
Harvard University | 2015 Competitor | www.wisesystems.com

WISE Systems provides software to make companies more efficient and deliveries more predictable. They help companies plan delivery routes, execute on routes through continuous optimization that responds in real-time to day-of changes, and improve over time through machine learning that uses data to inform future improvements.

The WISE Systems team spent the summer of 2016 in the Logistics accelerator. They are a Top 10 Techstars Mobility company and are based in Cambridge, Massachusetts.
xBITS
Formerly RightBiotic | Birla Institute of Technology and Science, India | 2016 Competitor | http://xcelbits.com

xBITS is medical diagnostic startup. They are developing RightBiotic, a rapid diagnostic system for diagnosing urinary tract infections (UTI). UTIs are the most common and prevalent bacterial infection. xBits’ assay is a patented smart sensor that provides three key benefits required for a UTI diagnosis: rapid detection, specificity and affordability.

xBITS is led by an energetic team of highly motivated academicians, science graduates, engineers and managers committed to provide equal access to reliable healthcare for all including rural, remote and hard-to-reach populations at affordable cost with the help of ingenious use of technology.

The company is funded in part by the BITS Department of Biotechnology and the Indian Council of Medical Research.

xip
Formerly Silicon BioDevices | University of California, Berkeley | 2009 Competitor | http://xip.life

Xip is a medical device company developing a lab on a microchip. Their product, GO, is a disposable blood analyzer that wirelessly uploads lab-quality clinical measurements in minutes.

At the core of the GO platform lies a fully integrated molecule counter. Multiple proteins, nucleic acids and small molecules can be measured simultaneously from one drop of blood, on the GO. The single-use disposables are produced inexpensively using existing high-volume semiconductor manufacturing capacity. These devices will be deployed in Emergency Departments initially to simplify the process of diagnosing heart attacks by providing on-demand, high-sensitivity biomarker measurements.

xip is supported by NASA, XPrize, and the National Institutes of Health. They are headquartered in Berkeley, California.

YouRefund
The University of Texas at Austin | 2016 Competitor

YouRefund is a mobile app that enables foreign shoppers to recover their sales taxes spent on items that are bound to leave the country. The company is pivoting towards a software services provider.
Ziosk
Formerly TableTop Media | Southern Methodist University | 2006 Competitor | www.ziosk.com

Based in Dallas, Ziosk is the first entertainment, ordering and pay-at-the-table tablet touchscreen for the restaurant market. The technology, featuring a seven-inch Android OS touchscreen and credit card reader, resides on each table and allows the guests to see menu items, play games, view news, order food and beverages and “pay on demand,” which give guests control over their dining experience. With its interactive capabilities, Ziosk and its footprint have created the Ziosk Media Network, a digital media platform for partners to create engaging experiences at the point of purchase. Ziosk and the Ziosk Media Network are revolutionizing the experience and economics of dining.

Ziosk announced in October 2016 that Time Inc. magazines will be syndicated through the Ziosk tablet. Publications include People, Sports Illustrated and Entertainment Weekly.

Ziosk has been featured in FORTUNE, The New York Times, The Washington Post and The Wall Street Journal. It has received numerous accolades and awards and was named one of 100 Brilliant Companies of 2011 by Entrepreneur.

Founded in 2008, Ziosk currently serves over 50 million guests each month across the nation. They intend to venture into the online ordering arena in summer of 2016. As one of the Dallas Fast Tech 5, they are one of the fastest growing businesses in Dallas.