



UNIVERSITY OF MARYLAND



30 YEARS OF ENTREPRENEURSHIP AND INNOVATION-DRIVEN IMPACT IN MARYLAND

\$32.3B

Mtech's total economic impact since 1985

19,000+

8,000+ direct jobs created through Mtech programs; supporting 19,000+ ongoing jobs in Maryland

\$28.1B

Revenue generated by the top-performing MIPS products

\$3.6B

Revenue generated, investments and contracts by and acquisitions of Mtech Ventures companies since 1985

\$30M

Investment, grants and contracts raised or acquired by Mtech Ventures companies since 2008

900+

Entrepreneurs gaining expert advice through Mtech's free, monthly, open Entrepreneur Office Hours since 2006

386

Companies engaged by Mtech programs in 2013

27

Total companies in Mtech Ventures programs in 2013

1,000+

Average annual enrollments in Mtech's entrepreneurship and innovation courses

29

Entrepreneurship and innovation courses offered by Mtech

\$345,380

Entrepreneurship scholarships supported by Mtech per academic year

\$705,500

Support for startups awarded through Mtech's business competitions since 2001

53

Initiatives at other universities based upon the successful Hinman CEOs Program

3

Blockbuster TAP incubator graduates, including two that sold for \$1B+ and another that developed and licensed a leading hybrid-electric drive technology

MARTEK
life enriched.™

Martek developed Life's DHA, a fatty acids product derived from algae that studies show aids in the development of the eyes, brain, and central nervous system in infants. In 2013, 99% of all infant formula product lines in the U.S. included Life's DHA. Martek was acquired by Royal DSM for \$1.1 billion in 2010.

DIGENE

Digene created the only FDA-approved test for detecting human papillomavirus (HPV), a leading cause of cervical cancer. In 2007, Qiagen bought the company for \$1.6 billion.

paice

Developed and licensed a leading hybrid drivetrain technology to Toyota and Ford Motor Company.

EDUCATION PROGRAMS

LEARN

EDUCATING THE NEXT GENERATION OF TECHNOLOGY

ENTREPRENEURS: mtech.umd.edu/educate

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| Hinman CEOs Program hinmanceos.umd.edu | Nation's first living-learning entrepreneurship program, serving approximately 90 upperclassmen from diverse majors |
| Entrepreneurship and Innovation Program (EIP) eip.umd.edu | Living-learning program for 150 underclassmen, managed by Mtech and the Honors College |
| Hillman Entrepreneurs Program hillman.umd.edu | Scholarship-based program for entrepreneurial transfer students from Prince George's Community College and Montgomery College |
| Master of Technology Entrepreneurship mte.umd.edu | Online master's degree program combining award-winning academics with an online startup incubator |
| Minor in Technology Entrepreneurship mtech.umd.edu/educate/minor/ | 15-credit technology entrepreneurship minor available to all students on campus |
| MOOC: Developing Innovative Ideas for New Companies coursera.org/course/innovativeideas | Free online course with Coursera, launched in 2013, with more than 300,000 students from 150+ countries |
| Courses in Entrepreneurship and Innovation mtech.umd.edu/educate/courses | 1,000+ average student enrollments annually in 20+ courses, including middle school, high school, undergraduate, graduate and professional |
| Young Scholars Program/ Young Scholars Discovery Program in Entrepreneurship summer.umd.edu | Summer programs in entrepreneurship for middle school and high school students |
| Citrin Impact Seed Fund | \$50,000 annual seed fund for students of EIP, Hinman CEOs and Hillman Entrepreneurs |

Additional entrepreneurship education activities include:

- **Online courses for UMD students:** Online undergraduate and graduate courses in entrepreneurship and innovation offered in a video-based, asynchronous format
- **Freshmen Connection Course in Entrepreneurship:** Fall course in entrepreneurial opportunity analysis serving approximately 125 students each year
- **Hinman CEOs Alumni Fund:** Established and funded by Hinman CEOs alumni, supports student ventures through competitive grants



SQUARESPACE

Squarespace, an industry-leading, all-in-one website publishing platform provider, raised \$78.5 million and employed 285 people as of May, 2014.



FiscalNote, co-founded by a current Hinman CEOs student, is a real-time, online platform that tracks, monitors, and predicts the outcome of state legislation. The company raised \$1.2 million from investor Mark Cuban, New Enterprise Associates, and First Round Capital's Dorm Room Fund.



Alertus Technologies has a decade of experience in developing emergency alert systems for campuses and large-area, high-occupancy facilities. The multi-million-dollar annual revenue company serves hundreds of customers, including the U.S. Capitol.

VENTURE CREATION PROGRAMS

LAUNCH

HELPING ENTREPRENEURS CREATE SUCCESSFUL NEW VENTURES: mtech.umd.edu/create

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| DC I-Corps dcicorps.org | One of 5 regional nodes for the nationwide NSF I-Corps program, through which teams conduct 100 customer interviews guided by the scientific method and new tools like the Business Model Canvas to systemically reduce market risk and arrive at a sound business model |
| DC I-Corps Accelerator www.dciicorps.org/accelerator | Continued support for DC I-Corps teams completing the initial program; includes customer discovery, prototype and testing, fund-raising and company building assistance |
| National Capital Consortium for Pediatric Device Innovation innovate4kids.org | One of 7 nationwide FDA pediatric device consortia; collaboration between Children's National Health System, Fischell Dept. of Bioengineering and Mtech, for business, regulatory, legal, scientific, engineering, and clinical support for device commercialization |
| Technology Advancement Program tap.umd.edu | State's first technology business incubator; lab and office space; staff of seasoned startup and VC firm veterans; 100+ graduates, two billion dollar exits: Digene, Martek; companies raised \$30M since 2008 |
| VentureAccelerator va.umd.edu | Helps UMD inventors get research out of labs and into industry by helping them create successful companies; staff of seasoned startup and VC firm veterans; raised \$2M for VA companies this year |
| Startup Shell startupshell.org | Student-run nonprofit incubator that fosters entrepreneurship through collaboration at UMD |
| MD Intellectual Property Legal Resource Center mipirc.org | Free legal services to MD entrepreneurs; incl. patent applications, prior art searches, license agreements, non-disclosure agreements, company formation; located in TAP; partnership with UM Law School |
| Entrepreneur Office Hours eoh.umd.edu | Free, on-campus mentoring for entrepreneurs held monthly; advisors from throughout region, partnership with FounderCorps; close to 1,000 entrepreneurs assisted |
| Innovation Fridays www.innovation.umd.edu | Expansion of EOH to every Friday throughout campus; in partnership with Dingman Center, CSVC, AIE, and OTC |
| Rapid Prototyping Lab | State-of-the-art equipment and expertise in the use of Rapid Prototyping (RP) tools to produce three-dimensional and advanced hardware from computer-aided designs |



FlexEl is a UMD spin-out developing thin film batteries, battery solutions and power applications. FlexEl recently received a \$6 million investment from a Fortune 500 company, as well as \$3 million in grants and third party investment funding.



OmniSpeech's ground-breaking speech extraction technology, OmniClear, provides the highest quality background noise reduction and speech enhancement, delivering superior voice quality and intelligibility in a software-only solution.



FRN unites students on college campuses to fight waste and feed people by donating the surplus unsold food from their colleges and donating it to hungry Americans. FRN has chapters at more than 90 colleges and universities in 25 states, D.C. and Puerto Rico.

Additional venture creation activities include:

- **Citrin Entrepreneurial Fellows:** Four full fellowships for graduate engineering students who want to start sustainability-related tech companies; assigned a dedicated VA mentor
- **Chesapeake Bay Seed Capital Fund:** MD Dept. of Natural Resources (DNR) \$750K Venture Fund for MD startups with innovative technology addressing Chesapeake Bay pollution; managed by Mtech; \$250K/year over 3 years evergreen venture capital fund
- **Faculty Venture Fairs:** Biannual showcase of the Top 10 most promising science and technology faculty inventions at UMD; assistance to winners to start companies
- **Tech Transfer Committee:** Quarterly meetings with UMD researchers invited to present recent invention disclosures; connects inventors with MBA market research courses

PARTNERSHIP PROGRAMS

FLY

CONNECTING COMPANIES WITH UNIVERSITY RESOURCES TO HELP THEM SUCCEED:

mtech.umd.edu/connect

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| Maryland Industrial Partnerships (MIPS) mips.umd.edu | MIPS provides grants for university-based research that helps Maryland companies develop technology products. Commercial products benefiting from MIPS have generated more than \$28.1 billion in revenue, added thousands of jobs to the region, and contributed to successful products such as Martek Biosciences' nutritional oils, Hughes Communications' HughesNet™, MedImmune's Synagis®, and Black & Decker's Bullet® Speed Tip Masonry Drill Bit |
| MIPS DNR Funding mips.umd.edu | MIPS offers grants, funded by the Maryland Department of Natural Resources, for MIPS projects that have the potential to decrease runoff into the Chesapeake Bay and offer innovative solutions and products for utilizing Bay-polluting chicken manure |
| Maryland International Incubator mii.umd.edu | MII connects Maryland and International companies for successful joint ventures through a targeted array of business services, state-of-the-art facilities, and world-class resources |
| Mtech Baltimore | Mtech Baltimore directs, coordinate and encourages connections between UMCP and UMB in the biomedical arena, particularly engaging engineering, medicine, pharmacy, law, business and other colleges within both universities |
| Biotechnology Research and Education Program brep.umd.edu | BREP bolsters Maryland's burgeoning biotechnology industry by offering bioprocessing and cell culture facilities and services, as well as training and consulting for companies |
| Technology Ventures Building | Second-stage incubator space for high-tech ventures; also includes select TAP and VentureAccelerator companies |
| A Scholars Program for Industry-Oriented Research in Engineering (ASPIRE) aspire.umd.edu | Grant program that supports undergraduate research for industrially oriented engineering projects with Clark School faculty |



Through MIPS, Earth Networks developed the thermodynamic models it uses to predict energy consumption based upon weather data for its WeatherBug Home product, which integrates key weather variables into home energy management and demand response programs, saving energy costs for consumers and reducing peak loads for utility companies.



In addition to helping MedImmune optimize the production of its blockbuster drug Synagis, MIPS and BSF staff members trained the company's workforce. Synagis, a \$1 billion/year drug, prevents a serious lower respiratory virus in infants and children.



Hughes developed complete protocols for transmitting Internet data via satellite through MIPS. Hughes is an industry-leading provider of Internet over satellite, doubling the market share of its nearest competitor. In 2011, Hughes was acquired by EchoStar in a deal valued at \$1.3 billion.



Through MIPS, Black & Decker partnered with a UMBC faculty member to develop a new masonry drill bit that won a Popular Mechanics Design & Engineering Award. The completely redesigned drill bit used a new grade of carbide that resisted breakage and enabled more holes to be drilled on a single cordless drill charge.



WellDoc's mobile health diabetes manager, first tested through MIPS funding, was the first such application to receive FDA clearance. The company closed \$20 million in strategic funding in January, 2014.