ECONOMIC DEVELOPMENT:
The University for Virginia

COMMERCIALIZING TECHNOLOGY

▶ The UVA **research enterprise** generated $470 million in total expenditures with sponsored programs totaling $312 million in funding. (FY18)

▶ The UVA **Licensing & Ventures Group (LVG)** manages intellectual property and technology commercialization for UVA's research portfolio. LVG solicited and/or received 213 invention disclosures from UVA faculty, staff, and students; executed 77 commercial transactions; issued a record 59 US patents; and launched three new ventures. (FY18)

▶ LVG created the $10 million **UVA LVG Seed Fund** to launch and support new ventures emerging from the University portfolio.

▶ **Proof of concept funds** ($2+ million per year) established by UVA accelerate translational research projects.

▶ The **i.Lab at UVA**, open to the public, provides programs, funding, workspace, community, and mentorship to support new entrepreneurs and accelerate new ventures.

▶ UVA's **NSF I-Corps program** introduces STEM scientists and engineers to real-world, hands-on training that helps move ideas from the laboratory to the marketplace.

BUILDING THE TALENT PIPELINE

UVA instills relevant skills across all levels of education. Digital literacy and technology skills prepare future-ready talent.

▶ Enrollment in **computational science programs** at UVA increased substantially over the past five years. Computer science graduate enrollment doubled and undergraduate enrollment increased by 50%. A new certificate in data science is under development and will be available to all students.

▶ **Internships** provide novel connections to companies across Virginia. UVA Career Services integrates internship programs with targeted industry sectors.

▶ The **Center for K-12 Computing Education** within the Curry School of Education plays a leadership role in delivering teacher training to improve student success in Virginia's K-12 computer science standard.

▶ A **UVA Apprenticeship Program** offers highly motivated applicants an opportunity to learn a skilled trade through a combination of on-the-job training, technical education, and classroom instruction.

CREATING NEW MODELS FOR ECONOMIC GROWTH

UVA supports the state in advancing new models for economic growth that leverage public-private partnerships.

▶ UVA, GMU, and INOVA are collaborating with the Commonwealth on the **Global Genomics and Bioinformatics Research Institute (GGBRI)** in Fairfax to improve the health of Virginians. Private industry and additional Virginia institutions of higher education are invited to participate. UVA medical students will begin rotations at the **INVOA Fairfax Medical Center** in 2021 through establishment of a regional UVA campus.

▶ **UVA's Biocomplexity Initiative** will create research collaborations among engineers, clinicians, and social and basic scientists to drive the future of human health, habitat, and well-being.

▶ UVA is a partner in the **Commonwealth Cyber Initiative (CCI)**, collaborating with VT and other universities to spur growth in the cybersecurity sector.

▶ UVA is partnering with VT, VCU, and VSU to locate additional faculty and graduate students on site at the **Commonwealth Center for Advanced Manufacturing (CCAM)** to drive additional industry and to secure additional federal research.

▶ A newly developed **faculty database** will help industry connect with academic expertise. Additional universities across the state have been invited to participate.

▶ UVA, UVA-Wise, GMU, VT, and other universities are working together to address the **opioid crisis**.

Accelerating robust, enduring, and inclusive economic growth

$5.9 BILLION
ECONOMIC IMPACT

51,653 JOBS
EMPLOYMENT IMPACT

ECONOMIC DEVELOPMENT:
The University for Virginia

UNIVERSITY *of* VIRGINIA

Commercializing Technology: UVA-Related Startup Profiles

34
UVA-related startups
in Charlottesville

371,000
jobs at Virginia companies founded
or directly supported by UVA alumni

$160 MILLION
raised in equity funding by Virginia
companies founded by UVA alumni

SPURRING ECONOMIC GROWTH IN RURAL VIRGINIA

▶ UVA Professor Michael Timko is working with **22nd Century Group** to generate elite varieties of hemp plants with commercially useful characteristics. Development of successful plant varieties could advance the industrial hemp market in the Commonwealth and provide new markets for farmers in rural Virginia.

▶ **Fermata Energy** is leveraging UVA research to create electric vehicles (EVs) that provide energy storage services to the power grid, generating profit while parked. The company has a demonstration project in Danville, where they plan to manufacture advanced EV chargers. Fermata has a partnership with Nissan as a leader in the Vehicle-to-Grid industry.

▶ **Virginia College Advising Corps (VCAC)** connects first generation students with all postsecondary options including technical training, community college, and university, and is active in Virginia's most rural communities.

IMPACTING HUMAN HEALTH THROUGH INNOVATION

▶ **DexCom, Inc.**, the leader in continuous glucose monitoring for people with diabetes, recently acquired **TypeZero Technologies, Inc.**, a digital health company revolutionizing the management of Type 1 and Type 2 diabetes. TypeZero's products include software for automated insulin delivery systems, technology based on decades of research across disciplines at UVA. The company will remain in Charlottesville as part of DexCom.

▶ Discovered by UVA Professor Gordon Laurie, **TearSolutions'** first-in-class therapy is a synthetic form of the protein lacritin which targets the causes of dry-eye disease.

CREATING LOCAL JOBS ALIGNED WITH REGIONAL TARGET INDUSTRIES

▶ **PsiKick** is building batteryless industrial internet-of-things systems using its custom low-power microchips to provide new insights without needing batteries or maintenance.

Jobs created to date: 43

▶ **Mission Secure, Inc.** is a leading control system cyber security company serving the oil, gas, power, transportation, and defense industries. The patented "MSi Platform" mitigates cyber-attacks and delivers visibility, protection, and corrective capabilities that maintain safe and reliable operations.

Jobs created to date: 25+

LASTING IMPACT OF EDUCATION SOLUTIONS

▶ **PALS, or Phonological Awareness Literacy Screening**, is the state-supported screening tool guiding the early detection and intervention of reading difficulties. Under the legislative mandate of Early Intervention Reading Initiative (EIRI), it is used by 131 out of 132 Virginia school divisions. PALS supports the EIRI initiative, and its technological and administrative infrastructure has been leveraged to support Virginia's Kindergarten Readiness Program and in attaining the recently-awarded $9.9 million federal Preschool Development Grant.

▶ Founded in 2008, **Teachstone®** delivers the Classroom Assessment Scoring System® (CLASS®) nationwide and around the globe. This observation tool measures interactions between teachers and children to improve teaching and enhance learning.

Jobs created to date: 150+

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