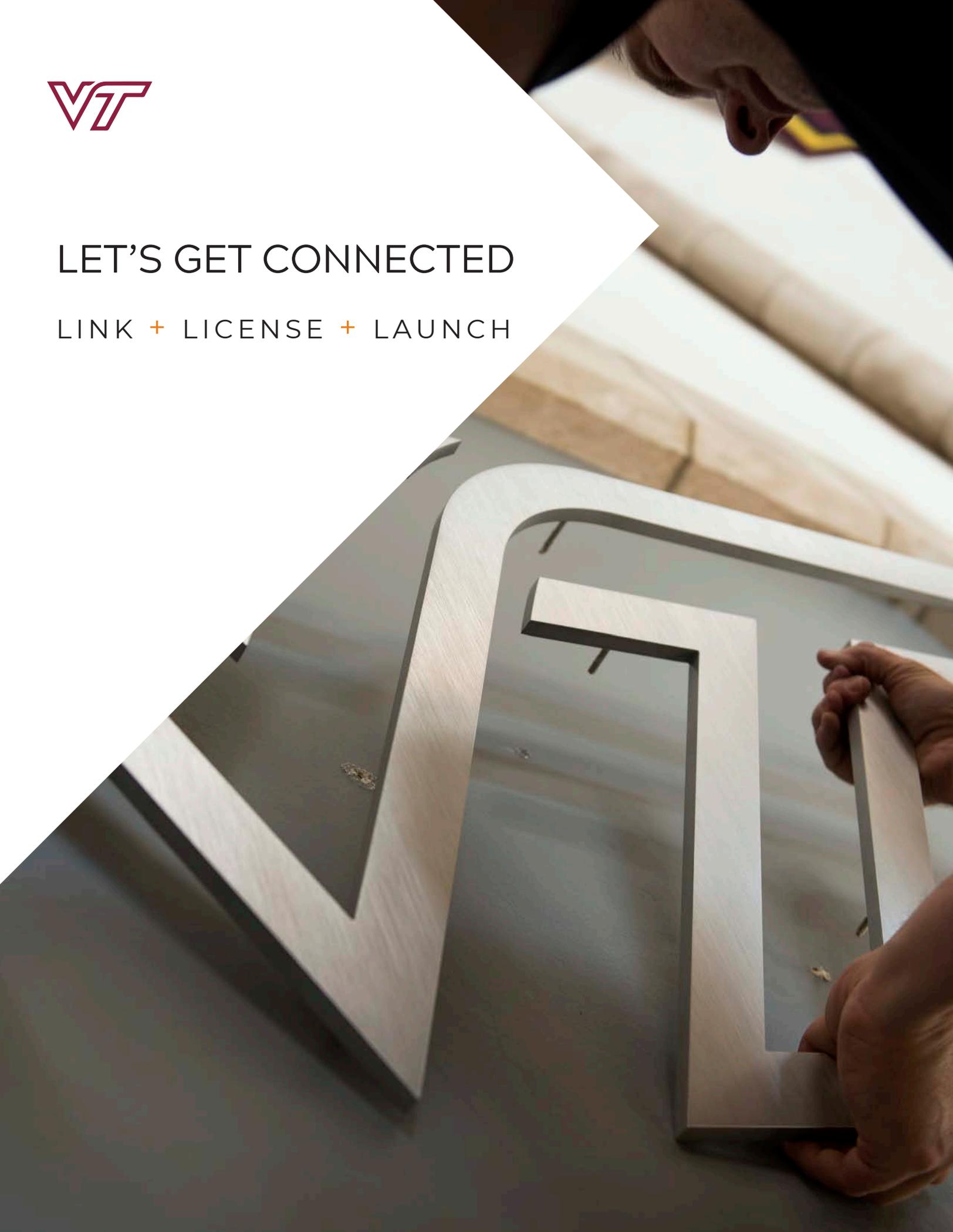




LET'S GET CONNECTED

LINK + LICENSE + LAUNCH



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Brandy Salmon, Ph.D.
Associate Vice President for
Innovation and Partnerships
Virginia Tech

Welcome,

Amazing things are unfolding at Virginia Tech. We are creating new models of interdisciplinary learning in higher education and exploring new frontiers of research and innovation at the human-technology frontier. Our use-inspired portfolio offers the foundations for start-up companies with the potential to ignite ecosystems. K-12 STEM education programs and inclusion and diversity initiatives are addressing issues of access and equality that are central to our national and economic competitiveness. And, if that's not enough, we are launching an entirely new Innovation Campus in Alexandria, Virginia, to meet the rapidly changing needs of the 21st century digital economy.

By design, we're not doing it alone. Systems-level issues cannot be addressed within an ivory tower. Virginia Tech is part of something bigger than ourselves, and industry partnerships are an imperative.

Partnerships don't happen by accident. They take attention, focus, and expertise.

LINK LICENSE LAUNCH has been built to deliver. We are a team of professionals dedicated to all aspects of corporate partnerships, from research collaborations, to corporate giving, to technology commercialization, to start-ups.

One of my favorite quotes is credited to Margaret Mead: "Never doubt that a small team of committed citizens can change the world; indeed, it is the only thing that ever has." We agree. And it is with optimism, hard work, and service-oriented sensibilities that we get to work.

In just two years, we have grown from an office of one to a team of twenty and have been involved in some of the largest and most important partnerships and investments in the history of Virginia Tech. We are just getting started.

We hope you are as excited to get to know us as we are you. *Together, we can change the world.*

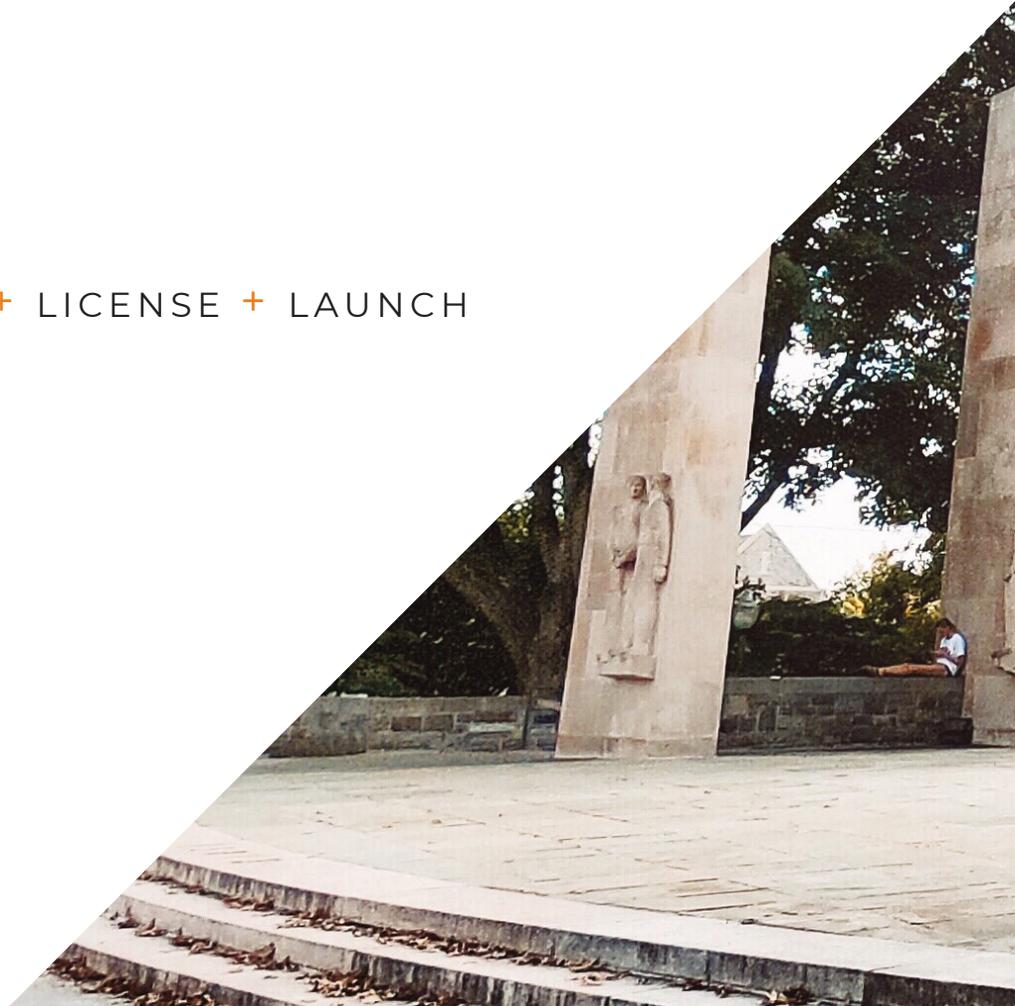
Sincerely,

A handwritten signature in black ink, appearing to read "Brandt". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

A decorative graphic on the left side of the page, featuring a maroon triangle pointing right, overlaid with two intersecting grey lines forming an 'X' shape.

You're trying to change the world.
So are we.
Let's do it together.

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UT PROSIM That I May Serve

In the modern economy, talent and technology are the leading sources of competitive advantage for organizations. As the very nature of work changes, firms are seeking new platforms for partnership and innovation. As the largest and most comprehensive university in the commonwealth, Virginia Tech offers pioneering models in education, cutting-edge research, and scale to be the engine for industry. **We are your go-to partner.**



Virginia Tech delivers.

Put our value proposition to work.

Our talent can be your greatest asset.

With nine colleges and a graduate school, the university is home to 34,000 students. Our \$500M+-per-year research portfolio spans engineering and life sciences, as well as social sciences, policy, and creative arts. We are the largest producer of STEM graduates in the state and the fourth largest producer of engineers in the nation. Recruiters consistently rank Virginia Tech among top schools for the quality and quantity of our graduates, who are known for their intellect, skills, and work ethic.

We are a destination for interdisciplinary research and discovery.

Our diversified research portfolio has us supporting all major federal agencies, including secure research, while over 15 percent of expenditures derive from corporate sponsors. Our breadth of expertise enables teams to assemble around big ideas to tackle interdisciplinary complex problems, as well the associated human, policy, and ethical issues of today.

We're meeting the needs of the digital age.

In connection with the Amazon HQ2 expansion in northern Virginia and a \$550M investment by the commonwealth in Virginia Tech, we are building a brand-new graduate campus in Alexandria, Virginia, and expanding undergraduate computer science and engineering programs in Blacksburg. The Innovation Campus will serve as a magnet for digital tech talent, research, and innovation to create the next hot tech hub and complement the federal government and its partners.

Our capabilities are globally recognized.

Virginia Tech has four applied research institutes that serve as global destinations. The [Virginia Tech Transportation Institute](#) (VTTI), for example, is a one-of-a-kind research institute with \$110M of infrastructure and testing facilities, and serves as a renowned option for transportation research, analysis, and development for global companies and public-sector partners. The work of the [Hume Center](#) and the [Commonwealth Cyber Initiative](#) provide world-class and unique resources, talent, and physical infrastructure to advance cyber technologies and fill significant workforce gaps.



#5

Nationally in
engineering degrees
awarded

American Society of
Engineering Education

Virginia Tech has
34,000 students

#5

Top-rated
engineering and
computer science
graduates

Wall Street Journal Recruiter

Land-grant
mission of service



A recent \$3.8M award from the Department of Defense in support of the Office of Naval Research's Manufacturing Engineering Education Program symbolizes our commitment to scaling pioneering programs needed by private- and public-sector partners.

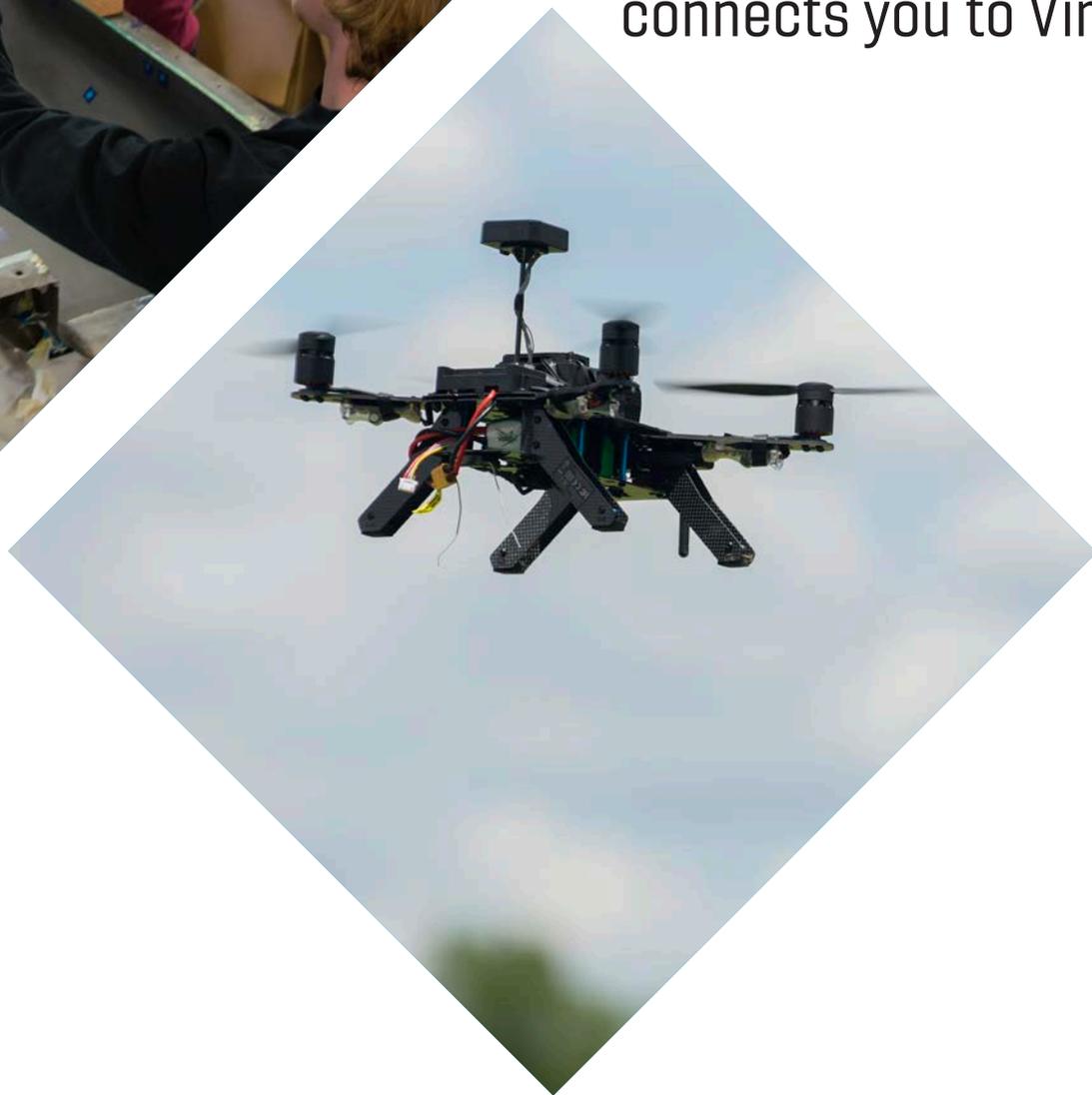


“The Virginia Tech team will work to create a multidisciplinary program that seeks to create and sustain a workforce for the design, application, and fabrication of systems such as communications, radar, and related areas in applied electromagnetics.”

Bradley Davis, Research Assistant Professor at the Hume Center for National Security and Technology



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connects you to Virginia Tech.



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We are optimists and problem solvers, and work in the spirit of our motto, *Ut Prosim: **That I May Serve.***

LINK LICENSE LAUNCH is a team of scientists, engineers, business developers, consultants, entrepreneurs, intellectual property attorneys, and technology transfer professionals. We bring the full complement of skills needed to support strategic alliances, commercialization, and new company formation.



We assemble around big ideas and problems that matter.

Let's team up.

We take a systems-of-systems approach.

Through our interdisciplinary research, practical sensibilities, and hands-on and minds-on learning, we are responding to complex global challenges. By taking a systems-of-systems approach designed to overcome traditions that separate STEM fields from the liberal arts, we are driving investment, talent, and focus to complex technological, market, and societal problems that matter.



Since 1988, the Virginia Tech Transportation Institute (VTTI) has been on the cutting edge of transportation innovation.

VTTI is developing, testing, and deploying next-generation vehicles and technologies to make driving safer and, ultimately, to prevent all traffic-related deaths on our nation's highways. By integrating vehicular systems, data sciences, and human factors research, VTTI is working with virtually every leading firm in the transportation industry to aid in the development and assessment of tomorrow's vehicles and technologies.

The best innovations occur when talented people from disparate fields are connected and their skills and views are focused on difficult problems that matter. At Virginia Tech, we assemble around big ideas and broad themes and, in so doing, encourage creativity, risk taking, and collaboration.

We explore the human implications of next-gen technology. Through a human-centered approach, we not only develop next-generation solutions, but we explore the implications of technologies in the digital age. We create platforms for advancing participation in the workforce, expanding inclusion and diversity, and aiding equity and prosperity. Our growing footprint across the commonwealth creates opportunities along the urban-rural continuum.

We seek to include diverse perspectives.

With our expanded Office for Inclusion and Diversity, we are bringing a host of new programs and engagement platforms to the university, including the College Access Collaborative, which is working to expand access to Virginia Tech for students in communities with low high-school and post-secondary education rates.



We've been there.

LINK LICENSE LAUNCH team has been assembled for partners with experience in both higher education and corporate settings:

Alliance management and business development

Successful start-ups

Biomedical, mechanical, nuclear, systems engineering, and research professions

Higher education and alumni relations

Federal program management

Non-profit and foundation program management

Strategic consulting

Intellectual property law

Project management and executive administration

Marketing and web development

Corporate leadership at companies including IBM, Medtronic, Guidant, Merck, BWXT, Booz Allen Hamilton, EAB, Luna Innovations, RTI International, and Novozymes

Academic and research leadership at organizations including Duke University, Indiana University, The George Washington University, the University of South Carolina, and Pacific Northwest National Labs

For more about us, check out our website.

vt.edu/linklicenselaunch



“Bringing value to Hokies working within industry partner organizations is among our most important strategic activities. New initiatives like our Corporate Chapters programs are deepening connections among Hokies within their own organizations to support their professional goals while creating more opportunities to engage with Virginia Tech. As a Hokie, I could not be more excited by the great work underway.”

Gwen Harrington, LINK LICENSE LAUNCH



We are a one-stop shop.

Come visit!

Drawing from the university's deep bench of people, research, programs, and intellectual property, we offer a comprehensive set of services, from supporting industry partnerships to technology commercialization and start-ups.

LINK takes a proactive, portfolio-based approach to serve industry partners. We do the heavy lifting needed to move from ambition to actionable partnerships by staying abreast of market and company needs, drawing connections, hosting innovation sessions, putting pen to paper to shape ideas, and cutting through administrative hurdles.

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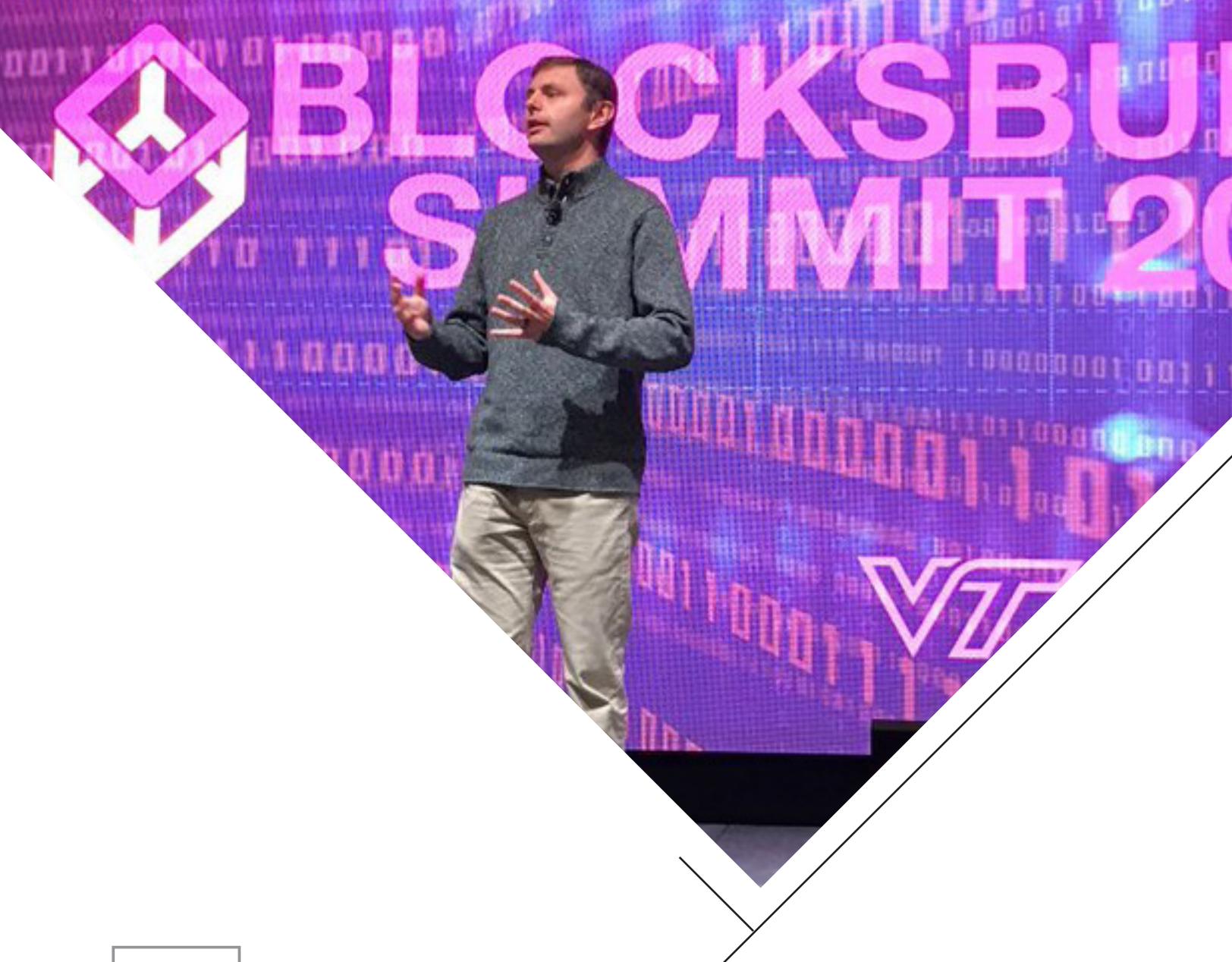


“LINK LICENSE LAUNCH is our flywheel — each activity builds on and benefits the other so that we deliver on our mission to translate discoveries to market, seed new ventures, and ignite the innovation economy.”

Mark Mondry, LINK LICENSE LAUNCH

LICENSE moves beyond traditional tech transfer by offering value-added assessment services and insight and business-friendly negotiation and licensing. Our experienced team knows what it takes to navigate the complex process of technology transfer and we bring a full suite of competencies, including depth in technology transfer and negotiation, new venture development, intellectual property (IP) management, and technical expertise.

LAUNCH, the Center for New Ventures, catalyzes start-ups by working with faculty, graduate students, and external parties to shape ideas and discoveries into fundable opportunities and by offering founder-friendly terms. With a service orientation, we evaluate discoveries for possible application and value, establish IP protection strategies, and, in collaboration with faculty and graduate students, shape opportunities to be transitioned to the market.



We've been busy.

And we're just getting started.

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Shaping a new kind of workforce.

Founded in 2018, LINK LICENSE LAUNCH is setting the standard with successes, including partnerships with [Boeing](#) and Caterpillar, founding members of the Calhoun Discovery Program. With industry-embedded professors of practice, market-informed sandbox projects, and scholarships for under-represented students, the [Calhoun Discovery Program](#) is delivering a new kind of student experience, integrating engineering, science, business, design, arts, humanities, and policy.

Catalyzing worldwide collaboration.

In 2019, LINK seeded the first-ever [Blocksburg Summit](#), bringing blockchain leaders from around the world to Virginia Tech to engage in conversations at the intersection of technology, research, regulation, policy, and economics in commercial enterprises, government, and education. The summit expanded the reach of Virginia Tech's blockchain program, which was seeded in 2018 by a [\\$3M gift from Block.one](#) to help the company develop the talent pool of computer science graduates with blockchain skills.

Helping inventions become market innovations.

In just one year, the LICENSE & LAUNCH team doubled the number of licenses from the prior year with 20 new deals. We helped form six tech start-ups and encouraged nearly 150 invention disclosures from the Virginia Tech community. Our applied research led to applications for more than 70 patents, three new varieties of plants, and more than 50 patents issuances — also double the prior year.

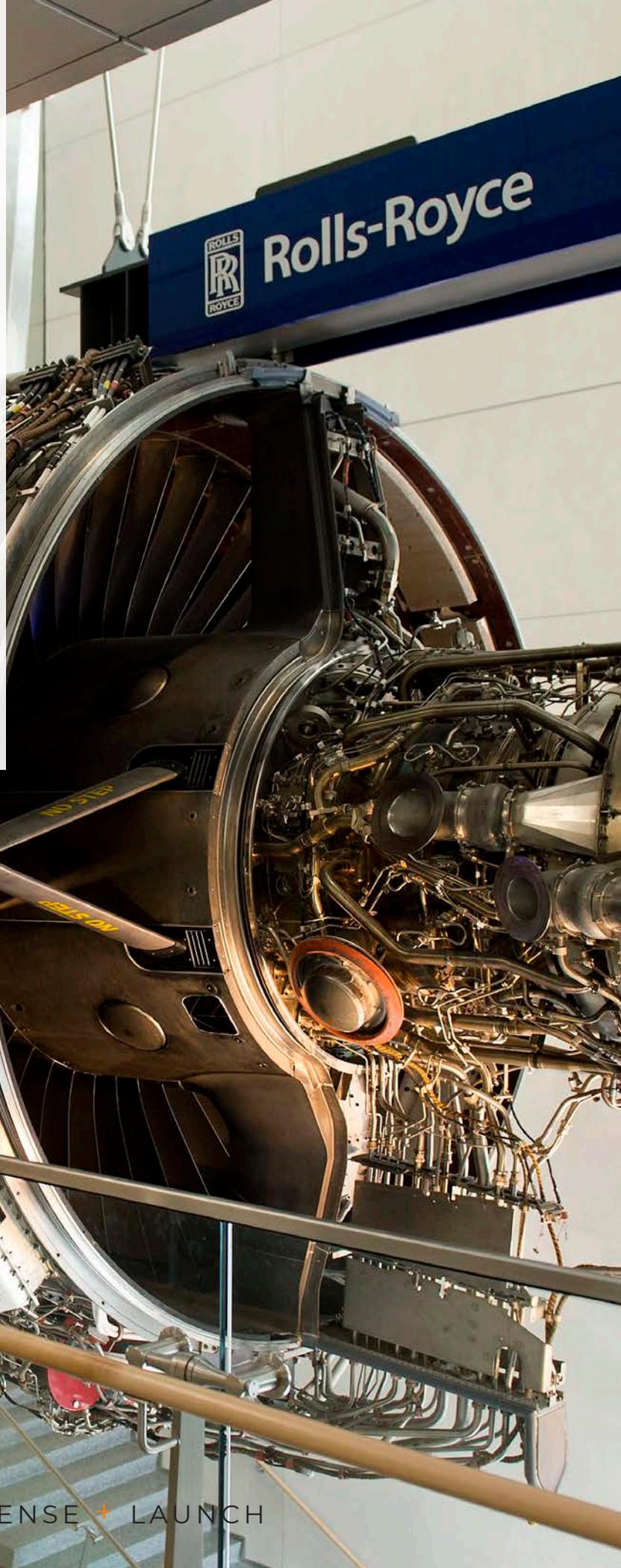
Supporting new platforms for partnership.

At the same time, we supported major university initiatives, such as the [Virginia Tech Innovation Campus](#) and the [Commonwealth Cyber Initiative](#), which will forever change the trajectory of Virginia Tech and offer new platforms for partnership and innovation near the nation's capital.



“A strategic alliance with Virginia Tech offers the high-caliber and diverse talent a company needs to build its workforce, as well as a strong and growing research enterprise that can become an extension of a corporate R&D team. We develop long-term partnerships to fill corporate needs and to add value to the corporate bottom line.”

Karin Clark, LINK LICENSE LAUNCH





We promote PARTNERSHIPS.

Let's get creative.

You have options. We navigate the intricacies, so you don't have to. We work with you to understand your needs and then facilitate cross-campus connections to talent and technology.

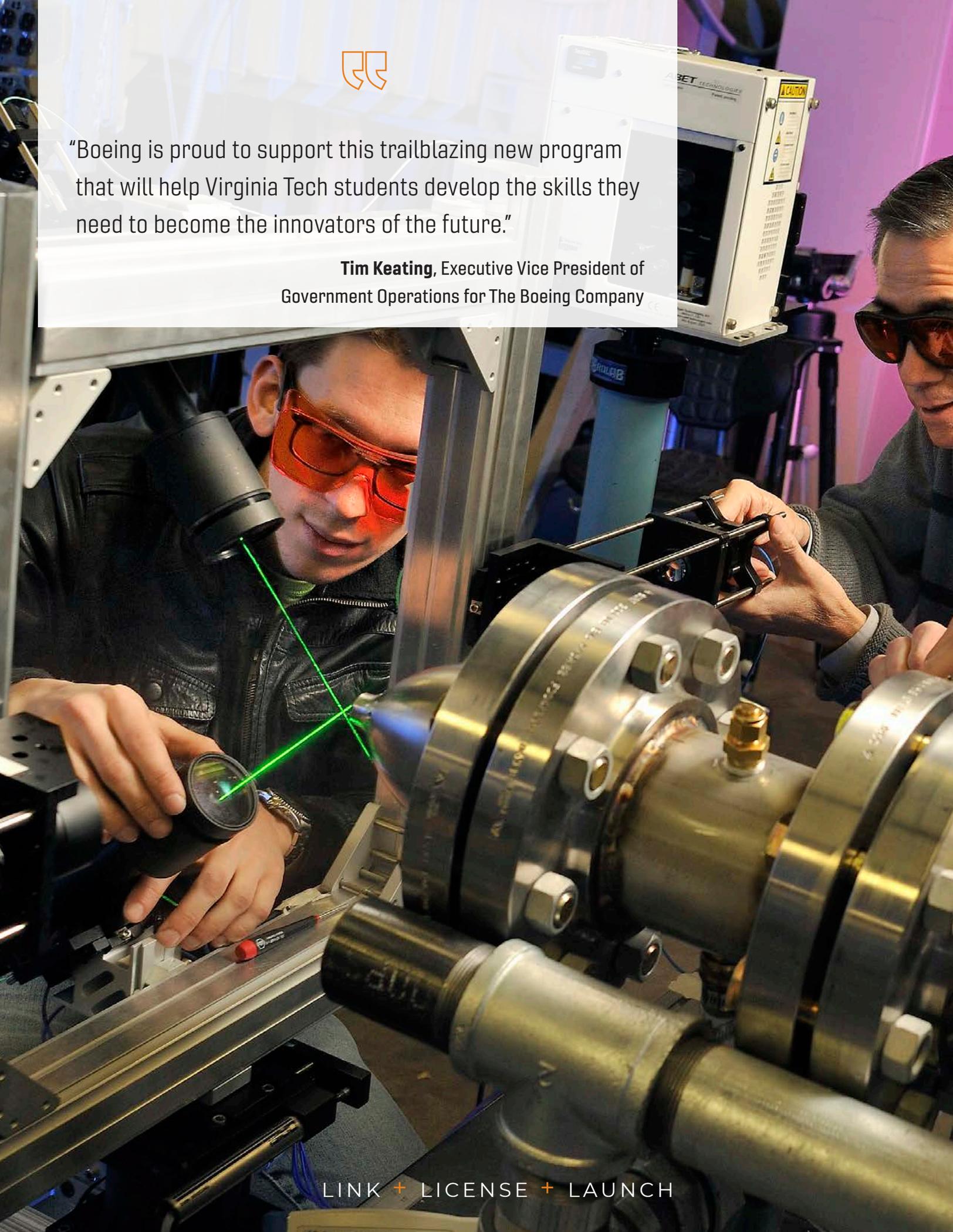
Virginia Tech has strategic relationships with many of the aviation giants, including Boeing, Raytheon Technologies, Northrop Grumman, Lockheed Martin, and Rolls-Royce. These companies have partnered with Virginia Tech because they like the product we turn out — sleeves-up, industry-ready students, who have the proven ability to tackle complex challenges. And they trust our faculty to provide timely, innovative research solutions that align with their corporate needs. These industry relationships enhance the education we provide, giving our students real, impactful work that is applicable to today's marketplace.

For over a decade, **Rolls-Royce** and Virginia Tech have leveraged capabilities in advanced systems diagnostics, flow modeling, power electronics, and other specialties to advance key aerospace technologies. Partnerships like those supporting the Rolls-Royce University Technology Center create a scaffold for other partnerships along the value chain and promote virtuous cycles of research, innovation, and talent that cannot be created within the walls of single organizations.



“Boeing is proud to support this trailblazing new program that will help Virginia Tech students develop the skills they need to become the innovators of the future.”

Tim Keating, Executive Vice President of Government Operations for The Boeing Company





Raytheon Technologies and Virginia Tech began a strategic relationship in 2015 with a \$1M research and education agreement to help fund joint research, scholarships, and experiential learning opportunities in the university's College of Engineering. To date, the company has funded 24 undergraduate capstone teams providing students with projects shaped from real-world technical challenges.

Northrop Grumman's deep commitment to the university is reflected in their support of military leadership education in Virginia Tech's Corps of Cadets, fundamental and applied engineering research collaborations, and numerous student initiatives, especially those focused on diversity and national security.

Boeing's most recent gift of \$3M to Virginia Tech's Calhoun Honors Discovery Program allows students to engage in collaborative, transdisciplinary projects. The financial support includes funding for student scholarships, experiential-learning grants, and salary support for program faculty.

In 2016, Virginia Tech and **Lockheed Martin** signed a master research agreement to foster increased research collaboration, greater recruiting initiatives, and technical engagement in Virginia Tech programs.



“Sometimes the need for funding in today’s competitive academic climate can overshadow long-term strategies for licensing and partnerships. Having an unbiased third party here at Virginia Tech to help us bypass that potential conflict of interest has been really valuable.”

Jonathan Boreyko, Assistant Professor
in the Department of Biomedical Engineering
and Mechanics



We promote the progress of science and technology.
Learn how we help breakthroughs break through.

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Licensing of the [fog harp](#) — a simple device that can increase the efficiency of water collection in arid regions — to GreenShift reflects the role that the LINK LICENSE LAUNCH team can play in ensuring that technologies with the potential for global impact can make it to market.

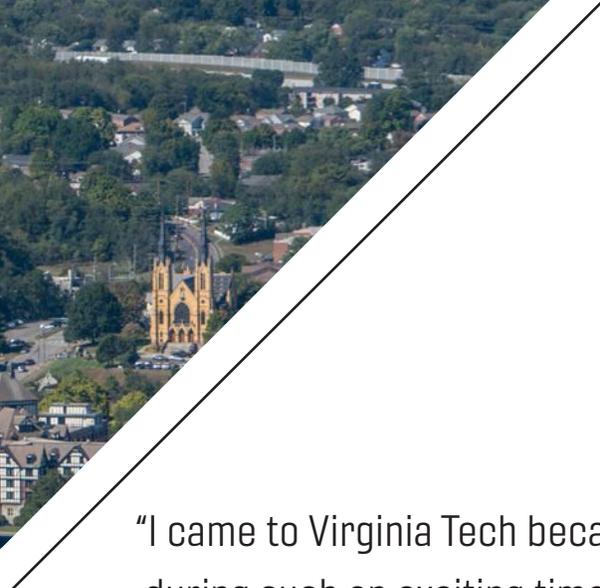
Created by an interdisciplinary research team at Virginia Tech working to alleviate water shortages in a world where two-thirds of the population lives under conditions of severe water scarcity, the 'fog harp' improves a decades-old method of catching microscopic droplets from the air. Taking inspiration from nature, the researchers improved upon traditional mesh netting with vertical arrays of parallel wires. The result: a more efficient design that sheds tiny water droplets three times faster and doesn't suffer from clogging.



We think at scale.

Find out how we are igniting innovation economies.

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“I came to Virginia Tech because I am really excited to join this fantastic team during such an exciting time in the university’s history. Initiatives such as those underway in Blacksburg, as well as Roanoke and northern Virginia, offer a new platform for working with industry and transitioning technologies to market. After years working in large public companies, I am really excited to be working on the other side for a university with a service focus and so much potential to do great things.”

Jason Piche, LINK LICENSE LAUNCH

We partner to combine unique strengths.

A truly distinctive public-private partnerships, The [Virginia Tech Carilion \(VTC\) School of Medicine and Fralin Biomedical Research Institute](#) (FBRI) in Roanoke was established in 2010 to join our strengths in biological sciences and engineering with Carilion Clinic’s experience in medical care delivery and medical education.

We deliver projects at scale.

Since the doors opened, FBRI has assembled over twenty-five research teams, with hundreds of faculty and staff. Focused on an ambitious mission, the teams are making transformational strides to advance the health of the region, the nation, and the world at the interface of innovative biomedical, behavioral, and computational research.

And fuel an innovation economy.

Entrepreneurial by design, FBRI teams work closely with LINK LICENSE LAUNCH to advance industry partnerships, license discoveries, and start new companies to fuel the innovation economy in southwestern Virginia and beyond.

Aligned with our mission of service, we promote the transition of technologies into the market for regional, state, and global impact.



We drive impact at home.

Learn how Virginia Tech discoveries are spurring regional prosperity.

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“The innovative healthcare solutions created by Virginia Tech positively impact needs from rural southwest Virginia to urban D.C. and around the world. LINK unlocks the opportunities for world-class research to meet growing healthcare needs through education and industry partnerships.”

Rob Gibson, LINK LICENSE LAUNCH



Beam Diagnostics, a spin-out located in

Roanoke, Virginia, aims to integrate cutting-edge research in behavioral economics with advanced technology to improve the lives of numerous individuals suffering from alcohol and other substance-abuse problems. LINK LICENSE LAUNCH is catalyzing regional growth in the health sector by working closely with the Fralin Biomedical Research Institute to help inventions become market innovations.

A local Virginia Tech spin-out, The Tiny Cargo Company, Inc.,

is centered on an exosome-based drug delivery technology that could provide companies with new modalities of delivery and improve efficacy of new and existing pharmaceuticals. The technology addresses limitations of current therapeutics by leveraging natural extra cellular components with an innate ability to encapsulate and release material in certain physiological conditions. LINK LICENSE LAUNCH enabled the company to spin out and bring their technology to market.



We create community.
Join the Hokie Nation.

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We facilitate campus-wide connections, in one place.

Our team customizes meetings, workshops, and events to meet our partners' needs. We bring the right combination of information, resources, and people from across the university into the room. From one-on-one faculty lab tours, to industry focused roundtables, to sector-wide summits, our team facilitates and hosts events to create opportunities for collaboration and growth.

Our students can be your difference-maker.

At Virginia Tech, students are engaged with our partners. Through experiential learning opportunities and internships, competition teams, and sponsored research, we are shaping your workforce. A LINK LICENSE LAUNCH intern program trains students to assess technologies, provide market analysis, and communicate with our faculty and partners. We help develop the talent and provide pathways for our students and faculty to meet the requests of industry today and find solutions for tomorrow.

We are expanding our reach.

And it's a gamechanger.

Virginia Tech's Innovation Campus will address society's most pressing challenges and educate the next generation of technology pioneers.

When asked by the Commonwealth of Virginia to support the bid for Amazon's HQ2, the LINK LICENSE LAUNCH team led the charge to shape the concept of the Innovation Campus. Today, the team continues to drive partnership and innovation efforts – making a reality Virginia Tech's goal of creating a global destination for the tech sector on the east coast.

The Innovation Campus will address society's most pressing challenges while educating technology pioneers to drive prosperity for the next generation. As a land-grant university for the 21st century, Virginia Tech is perfectly positioned to deliver on this promise. Our heritage as the commonwealth's leading research land-grant institution and presence throughout Virginia's urban and rural communities, combined with our size and strength in key technical domains, uniquely equip us to lead the transformation.

Assembling our faculty experts and partners in a strategic location near the nation's capital and leading tech companies, Virginia Tech is ready to think big and broad and explore the increasingly blurred boundaries between humans, computers, and systems. Our approach to technological innovation is human-centered, meaning the potential impact of the Innovation Campus is boundless.

Education at the Innovation Campus will span technical domains at the human-computing frontier and include artificial intelligence, machine learning, cybersecurity, data science and analytics, the Internet of Things, cyber-human systems, computing systems and networks at scale, distributed and cloud systems, high-performance computing, and human-computer interaction. Adjacent programs will include those at the intersection of humans, technology, policy, regulation, and ethics.

Virginia Tech's Innovation Campus is our opportunity to lead — regionally, nationally, globally — while also achieving the commonwealth's commitment to double the tech-talent pipeline, a goal set forth in the proposal that attracted Amazon to northern Virginia.



“I’m very excited to join Virginia Tech to help launch the Innovation Campus and the new master’s program in computer science that will close the talent gap by training students who want to accelerate career advancement, and by helping employers who have the need for this talent.”

Sara Hooshangi, Director of the Master of Engineering in Computer Science program





We are your destination for boundless impact.
Let's make a plan.

Virginia Tech offers a full range of ways to engage. Together, we can create a comprehensive relationship that helps your company meet its strategic goals.

Spark new ideas.

- Centers of Excellence
- Joint faculty appointments
- Sponsored research
- Advisory Board opportunities
- Industry affiliate programs
- Co-location opportunities
- Industry events
- Competitions

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“Our partnership with Virginia Tech continues to help us with key company priorities which include developing the most advanced technologies in the world, training the next generation of engineers, and advancing manufacturing processes and systems.”

- **Paul Nye**, Vice President of Quality,
Pratt & Whitney Aircraft Engines
(Division of Raytheon Technologies)

Build your workforce.

- Scholarship programs
- K-12 pathway initiatives
- Inclusion and diversity efforts
- Experiential learning
- Recruiting opportunities
- Sponsorships and branding
- Corporate chapters

De-risk your business.

- Virginia Tech start-ups
- Technologies for licensing
- Innovation labs
- Access to facilities and infrastructure
- Federal and state programs
- Thought leaders and experts
- Boutique, graduate-level talent



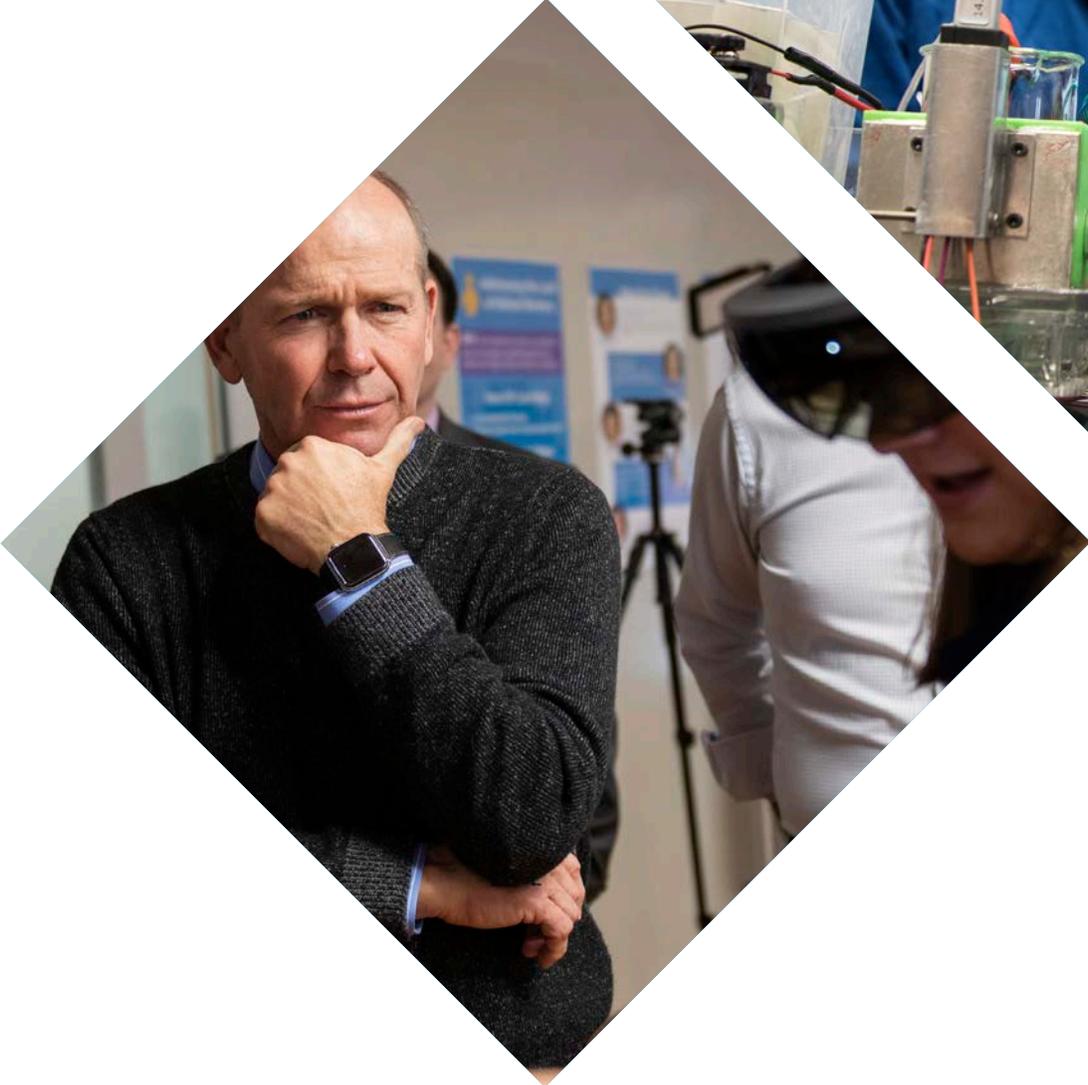
What is Next Up? We're asking industry.
Be part of the discussion.

Virginia Tech is looking beyond the now in a regular series of roundtables and events, **"Next Up: Conversations to shape the future."** We engage leading thinkers, doers, and partners in conversations that look around the bend and ask questions that are shaping industry, government, higher education, and the world.

What is the future of truth, of work, of privacy, of transportation? Where is technology headed? What are the economic, human, and societal implications? What are the biggest needs in talent, research, and innovation? **How can we help?**

Answers to these questions are shaping our collective understanding and positioning Virginia Tech to be part of the solution in our delivery of market-relevant programs and cutting-edge research that will drive the 21st century digital economy.

Take part.

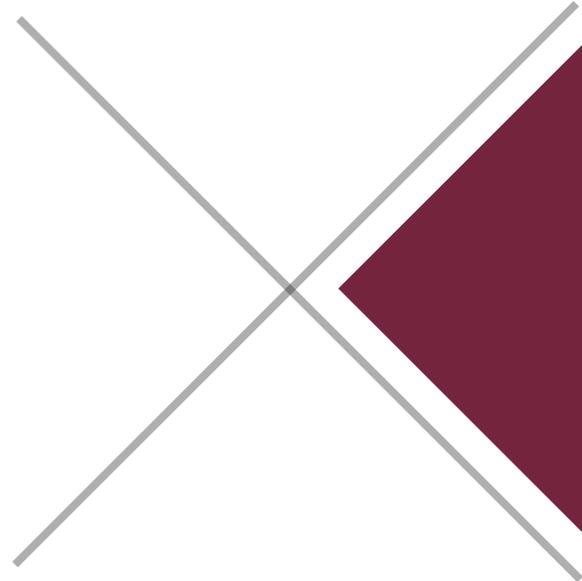




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We have a lot to talk about.
Let's get started.

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