Northeastern University
Center for Research Innovation

THE 2026 IMPACT REPORT

15 Years of Translating Innovation



- 2 LETTER FROM THE EXECUTIVE DIRECTOR
- 4 YEAR IN REVIEW: BY THE NUMBERS
- 5 YEAR IN REVIEW: ISSUED PATENTS
- 6 15 YEARS BY THE NUMBERS
- 7 15 YEARS OF GROWTH AND INNOVATION
- 9 CRI NETWORK: RESEARCH AT NORTHEASTERN
- 10 VENTURE: SPINOUTS & LICENSING HIGHLIGHTS
- 16 ECOSYSTEM IN ACTION: TTVC & VENTURIUM
- 19 COMMERCIALIZATION: INDUSTRY & GLOBAL PARTNERSHIPS
- 26 NATIONAL ACADEMY OF INVENTORS
- 30 FACULTY & INVENTOR SPOTLIGHTS
- 35 CRI ACADEMY & LEARNING ENGAGEMENT
- 37 WHAT'S NEXT: THE NEXT 15 YEARS OF CRI

About This Report

This annual report showcases the progress, partnerships, and innovations supported by CRI during Fiscal Year 2026 (July 2025–June 2026), as well as notable past accomplishments to celebrate CRI's 15th anniversary. Designed for faculty, leadership, and partners in industry and academia, it highlights how CRI advances translational research.

LETTER FROM THE EXECUTIVE DIRECTOR

Fifteen years ago, the Northeastern Center for Research Innovation was just a vision. The research enterprise was in its infancy, and we were new to the work of translating discoveries from the lab. Every building block had to be put in place, and there was a great deal of learning along the way.

From the beginning, we recognized that Northeastern has a dynamic, entrepreneurial spirit all its own. So, rather than adopting what works at more traditional universities, we set out to forge our own identity and find what works best for us here.

From 2011 to now, I'm extremely proud of the work every member of this team has put in to build CRI into what it is today. My career in tech transfer has been genuinely rewarding thus far – it's complex, meaningful work that continues to challenge me every day. I take great pride in playing a role in bringing Northeastern's most important research to market for the betterment of society, and I'm excited by what comes next as we continue building toward even more impactful outcomes.

The last 15 years have shown that university research needs not just protection but also active, sustained support to achieve real-world impact. As we reflect on this anniversary, a few moments stand out from over the years that, when told together, strongly represent the CRI.

Early on, we transformed Northeastern's poster session into RISE (Research, Innovation, Scholarship & Entrepreneurship) and grew the RISE Expo into the largest event of its kind, showcasing more than 400 faculty and student research projects and bringing industry and investors face-to-face with the vibrancy of our research community. We ran and elevated that program through 2020 before handing it to the Department of Undergraduate Research and Fellowships, where it thrives today.

In 2017, the company Giaran was acquired by Shiseido – marking the first acquisition of a Northeastern spinout. That moment showed us what was genuinely possible for our spinouts, and it directly inspired us to build more holistic, sustained support for the companies coming out of Northeastern research. From that moment on, a license agreement was no longer the finish line.

That shift led directly to the creation of the Spark Fund in 2018, the university's first gap funding program. Since then, $2.05 million in proof-of-concept investment has generated $24 million in follow-on capital – an eightfold return – and helped launch technologies that might never have left the lab otherwise.

Each decision and growth moment built on the next, advancing the university's research capabilities as the CRI matured as a resource. In FY26, that maturity showed up everywhere at once – from providing comprehensive support to our spinouts to help them move further, faster; to deepening industry relationships. We saw great expansion of the Technology Transfer Venture Consortium – growing from five founding universities to more than 25, with Northeastern serving as a national convener. We also saw the AI-enabled tools we built sharpen our own work, and our global innovation ecosystem taking root at our Oakland, Seattle, and Vancouver campuses.

While we celebrate this year's milestone, the anniversary itself didn't change how we worked. We put our heads down and got the job done. We don't operate differently because it's year 15 – we operate this way because it's who we've become over 15 years.

These successes are a team effort. None of it belongs to CRI alone. It takes a village – our research community, faculty and student founders, Research Enterprise Services, the Office of General Counsel, our industry and entrepreneurial partners, government relations, the Provost's Office, senior leadership, and every member of this team, past and present.

Thank you for building this with us.



Jennifer Boyle-Lynch
Executive Director
Center for Research Innovation

Year in Review/FY26 By the Numbers

New Inventors

97

21%
INCREASE OVER FY25

Issued Patents

66

57 U.S.

10.7%
INCREASE OVER FY25

Capital Raised

$25.7m

5% INCREASE OVER FY25

Licenses & Options

12

University Spinouts

9

Patent Applications

333

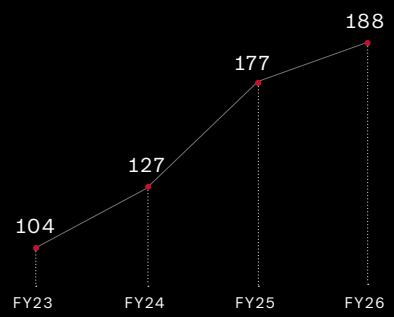
Gross License Revenue

$470k

Invention Disclosures

RECORD BREAKING

188



6.2%
INCREASE OVER FY25

YEAR IN REVIEW

Ambika Bajpayee
- 12,564,639

Albert-László Barabási
- 12,670,969

Ahmed Busnaina
- 12,456,659
- 12,415,721

Cristian Cassella
- 12,530,556
- 12,549,163

Kaushik Chowdhury
- 12,412,992

Leila Deravi
- 12,514,797

Daniel Distel
- 12,480,151

Salvatore D'Oro
- 12,489,690

Randall Erb
- 12,459,870

Craig Ferris
- 12,642,433
- 12,557,999

Yun Fu
- 12,561,755

Roger Giese
- 12,607,636
- 12,359,243

Jerome Hajjar
- 12,518,366

Josep Jornet
- 12,418,450

Neel Joshi
- 12,351,805

Ryan Koppes
- 12,551,506

Gregory Kowalski
- 12,498,339

Carolyn Lee-Parsons
- 12,543,667

Bradley Lehman
- 12,578,375

Kim Lewis
- 12,503,490

Laura Lewis
- 12,350,510

Tommaso Melodia
- 12,408,042

Yousof Naderi
- 12,476,490
- 12,633,777
- 12,374,931

Sarah Ostadabbas
- 12,567,173
- 12,629,073

Taskin Padir
- 12,454,067

Xiaomeng Peng
- 12,387,535

Alireza Ramezani
- 12,404,021

Francesco Restuccia
- 12,402,016
- 12,640,783

Cordula Robinson
- 12,374,073

Jeffrey Ruberti
- 12,461,030
- 12,461,029

Aatmesh Shrivastava
- 12,574,126
- 12,525,963
- 12,658,849

Srinivas Sridhar
- 12,648,709

Hongwei Sun
- 12,571,710

Ganeshsingh Thakur
- 12,351,574
- 12,486,228

Kiran Vanaja
- 12,531,162

Yanzhi Wang
- 12,554,987
- 12,626,131

Thomas Webster
- 12,653,793

Ulrike G. K. Wegst
- 12,594,713

Qi (Rose) Yu
- 12,451,230

Ke Zhang
- 12,478,684

Yi Zheng
- 12,502,622
- 12,357,923
- 12,503,375
- 12,656,024

issued patents

15 Years by the Numbers (Cumulative totals)

Disclosures

1,874

Issued Patents

799 in **27** COUNTRIES

Applications

3,923

Capital Raised

$515m

Spinouts

122

61 ACTIVE

39 MA-BASED

Licenses & Options

156

Spark Fund

$24m returned in **external capital** raised by spinouts

AN **8x** ROI

Series A-D Funding

$378m

Acquisitions

9 **$51m** total EXIT VALUE

License Revenue

$6.875m

$2.062m reinvested in **labs**

New Inventors

1,413

- **80%** of licensing goes to spinout companies commercializing university IP
- **60%** of disclosures carry government funding
- **18%** of portfolio from university collaborations
- **45+** spinouts currently in initial funding stages
- Active technology families have grown **52%** over the past five years while patent applications rose only **17%** – CRI is supporting more inventors and inventions while maintaining a well-curated portfolio

15 Years of Growth and Innovation

CRI began in 2011 with a gift from Rich D'Amore and a staff of three – a director, a patent specialist, and a manager of operations and finance. There was no patent database; patent correspondence lived in email inboxes. Despite those modest beginnings, the center quickly began to see results: invention disclosures nearly doubled in the first two years, from 57 in FY11 to 107 in FY13, and licensing and spinout activity grew alongside them.

Where Are They Now?

- **Giaran**
  Founded in 2016 out of Raymond Fu's Synergetic Media Learning Lab, Giaran used AI, computer vision, and augmented reality to let consumers virtually try on cosmetics, match shades exactly, and receive personalized recommendations in store, online, or on the go. Shiseido Americas acquired the company in November 2017 – the first acquisition of a Northeastern spinout.

- **Scipher Medicine**
  Built on network medicine research from Albert-László Barabási's lab, Scipher's PrismRA blood test predicts which patients with rheumatoid arthritis will respond to specific biologics before treatment begins. The test now has Medicare coverage and nationwide availability through Quest Diagnostics, the company has raised more than $200 million, and it was a 2024 AUTM Better World Award finalist.

- **Quad Technologies**
  Founded in 2013 on Northeastern technology, Quad developed QuickGel – a biocompatible, dissolvable hydrogel that captures and releases rare cells without leaving magnetic beads behind, improving purity and viability for CAR-T and other gene-modified cell therapies. Bio-Techne acquired the company in 2018, and QuickGel products are now used in laboratories worldwide.

- **Flaskworks**
  Flaskworks built closed, modular, disposable systems to manufacture dendritic cells, addressing a central bottleneck in producing cell-based immunotherapies for cancer and other diseases. Northwest Biotherapeutics acquired the company to advance its dendritic cell vaccine platform.

CRI MILESTONES

2011 – CRI founded

2012 – RISE launches

2013 – Venture Catalyst funding pilot; Hitting Your Target pitch training

2015 – First NAI Top 100 Worldwide ranking

2016 – Northeastern recognized as an R1 university

2017 – First spinout acquisition (Giaran); InnoEd Learning Series; Pathways to Partnership launches, Global Resilience Institute established

2018 – Spark Fund launches; online inventor portal for e-disclosures launches

2019 – Record breaking year for licenses and options

- **risQ**
  Spun out of Auroop Ganguly's Sustainability and Data Sciences Lab and co-founded with Evan Kodra (PhD '14), risQ built a climate risk analytics platform that quantifies how wildfire, flood, and heat exposure affect the creditworthiness of American municipalities – enabling systems-level adaptation to climate change. Intercontinental Exchange acquired the company in 2021.

- **BrilliantStrings Therapeutics**
  BrilliantStrings has developed a next-generation collagen platform enabling precise, injectable delivery of complete human collagen for musculoskeletal injury treatment and wound repair. Since receiving Spark Fund support, the company has raised $2.7 million and won LabCentral's 2025 Luminescence Competition ($200,000), two Johnson & Johnson JLABS QuickFire Challenge awards, and an ARPA-H Dash award.

- **pacDNA**
  Founded in 2023 on research from Ke Zhang's lab, pacDNA is expanding the range of diseases oligonucleotide therapeutics can treat. Its Brushield™ platform delivers these drugs to hard-to-reach tissues outside the liver and keeps them there for months, cutting required doses dramatically while reducing side effects. A Fall 2023 Spark Fund awardee, pacDNA has raised roughly $3 million in non-dilutive funding, recently secured a $490,000 Department of Defense CDMRP grant, moved into Portal Innovations' Ex3 facility, and brought on Northeastern alumnus Carl LeBel as fractional CEO.

CENTER FOR RESEARCH INNOVATION

2020
Venture Support Programs pilot

2021
Record spinout year, 14 companies formed

2022
Commercialization Specialist network launches

2023
NAI Chapter founded; IP Awareness Summit hosted at Northeastern

2024
TTVC founded; first Venturium hosted, Quantum Materials and Sensing Institute founded

2025
CRI Academy launches; NobleReach partnership begins

2026
First Technology Validation Agreement executed; record disclosure year

CRI Network

Harnessing diverse research to deliver breakthroughs that matter.



This map represents a selection of Northeastern's research technologies and does not constitute our complete portfolio.

Venture: Spinouts & Licensing Highlights

Translating Research to Impact in FY26

Commercialization takes different shapes depending on the technology. In FY26, CRI supported a growing number of new companies built on Northeastern research and advanced existing technologies through licensing partnerships – two paths toward the same goal of moving discoveries closer to the people they can serve.

New This Year

Nine new companies were formed on Northeastern research this year, including Fenway Biotech, Predictus.AI, Teradio, and TwiNet. Their work spans terahertz communications for high-speed data center links, digital twin systems for wireless networks, and sustainable plant-based colorants developed to replace synthetic food dyes.

Three portfolio companies also secured MassCEC and MassVentures grants totaling $225,000.

Flightpath Biosciences Licenses a Second Northeastern Drug

In November 2025, Flightpath Biosciences – a clinical-stage company spun out of Northeastern and co-founded by Kim Lewis, University Distinguished Professor of Biology and director of Northeastern's Antimicrobial Discovery Center – licensed FP530, also known as Formibactin A. The compound selectively targets harmful Gram-negative bacteria while preserving beneficial microbial communities, and its oral bioavailability makes it a candidate across multiple disease areas.

> **"Flightpath has the unusual opportunity to study this drug with potential for impact in multiple biological compartments," said Lewis, "while not destroying the symbiotic flora that is so important to human health."**

FP530 joins Flightpath's Targeted Bacterial Deletion™ platform, which aims to interrupt infection-driven disease before it becomes irreversible – including inflammatory bowel disease, colorectal cancer, endometriosis, and neuroborreliosis, a neurological manifestation of Lyme disease.

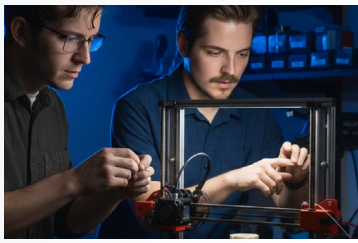
This is Flightpath's second license from Northeastern, both of which were facilitated by CRI. This latest license will help advance the discovery into clinical development.

READ MORE

Fifteen Years of Turning Research into Ventures

The path from laboratory discovery to viable company is rarely direct. Over 15 years, CRI has built a support model around that reality – early funding that allows honest testing, connections to programs that sharpen commercial thinking, and a long-term commitment to technologies that need years to mature. The ventures featured below show what that looks like in practice.

InLoop Finds a New Market for a Northeastern Printing Technology



Jeffrey Lipton, assistant professor of mechanical and industrial engineering, along with PhD students Brett Emery and Jacob Miske developed Viscous Thread Printing – a 3D printing process that produces customizable, variable-stiffness foams.

The team's first commercial hypothesis was custom orthotics for podiatrists, manufactured on a 24-hour turnaround. A CRI Spark Fund award and a place in the NSF I-Corps Spark program funded the customer discovery work needed to test it. However, that work led the team to conclude the orthotics market would not support a venture.

While the market discovery may seem disappointing at first, the finding was made early enough for the team to proactively pivot their research. Through NSF I-Corps Fusion, the team systematically examined alternate applications for the same underlying technology. The resulting spinout company, InLoop, is now developing the platform for custom, on-demand manufacturing of metal, polymer, ceramic, and glass foams, with applications spanning aerospace, medical devices, robotics, and advanced research. The company went on to complete The Engine Accelerator's Blueprint program, an eight-week course for deep tech founders culminating in a pitch showcase judged by venture capitalists and experienced founders, placing in the top three of its cohort.

Proof-of-concept funding is usually described as a way to accelerate promising technology. It also funds the discovery that a hypothesis will not hold. In InLoop's case, that finding came before the team had committed years to the wrong market, and the connections that followed – to I-Corps Spark, I-Corps Fusion, and The Engine – helped the technology find a stronger application.

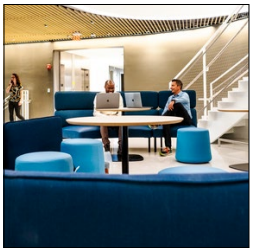
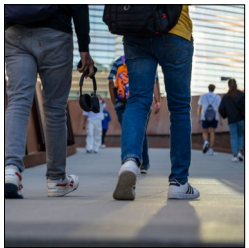
Imaginostics Advances a New Approach to Vascular Imaging

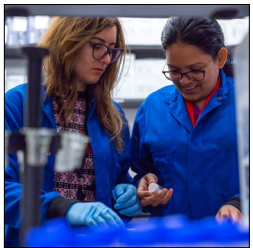
While earning his bioengineering PhD at Northeastern, Codi Gharagouzloo invented QUTE-CE MRI, an imaging technology that produces high-resolution, quantitative 3D vascular images with applications in neurology, cardiology, and oncology. The technique delivers images 100 times clearer than a standard MRI scan, and 10 times clearer than scans using gadolinium, a toxic contrast agent. It achieves this with a safe alternative agent and works on existing MRI hardware, requiring no new equipment.

Gharagouzloo credits Northeastern with providing the resources he needed to begin developing the idea. He later founded Imaginostics with Valerie Gharagouzloo, who earned her LLM at Northeastern's School of Law, and CRI protected and licensed the underlying intellectual property as the technology moved from dissertation to company.

Imaginostics has since raised $1.35 million in grants, including nearly $1 million from an NIH National Institute on Aging SBIR award for clinical validation, along with a $725,000 investment from the Alzheimer's Drug Discovery Foundation. The company received FDA Breakthrough Device Designation for use in patients with chronic kidney disease, for whom conventional contrast agents are contraindicated, and a clinical study is underway at Brigham and Women's Hospital. Further studies are examining whether the technology can potentially detect Alzheimer's-related vascular changes decades before symptom onset.

A technology of this complexity can take a decade or more to reach clinical validation. Sustained IP protection and institutional support over that span are what allow a discovery made during a PhD to remain viable long enough to reach patients.




From Science to Venture with NobleReach and HBS Foundry Partnerships

CRI's partnership with the NobleReach Foundation aims to close the knowledge gap between academic founders and senior commercial talent. Through a pilot program, CRI placed mission-driven entrepreneurial consultants into Northeastern spinouts working on defense technology, govtech, and broader societal challenges. The partnership connected academic founders with professionals who understand both commercial innovation and public sector pathways, drawing on vetted talent networks from Northeastern, NobleReach, and beyond.

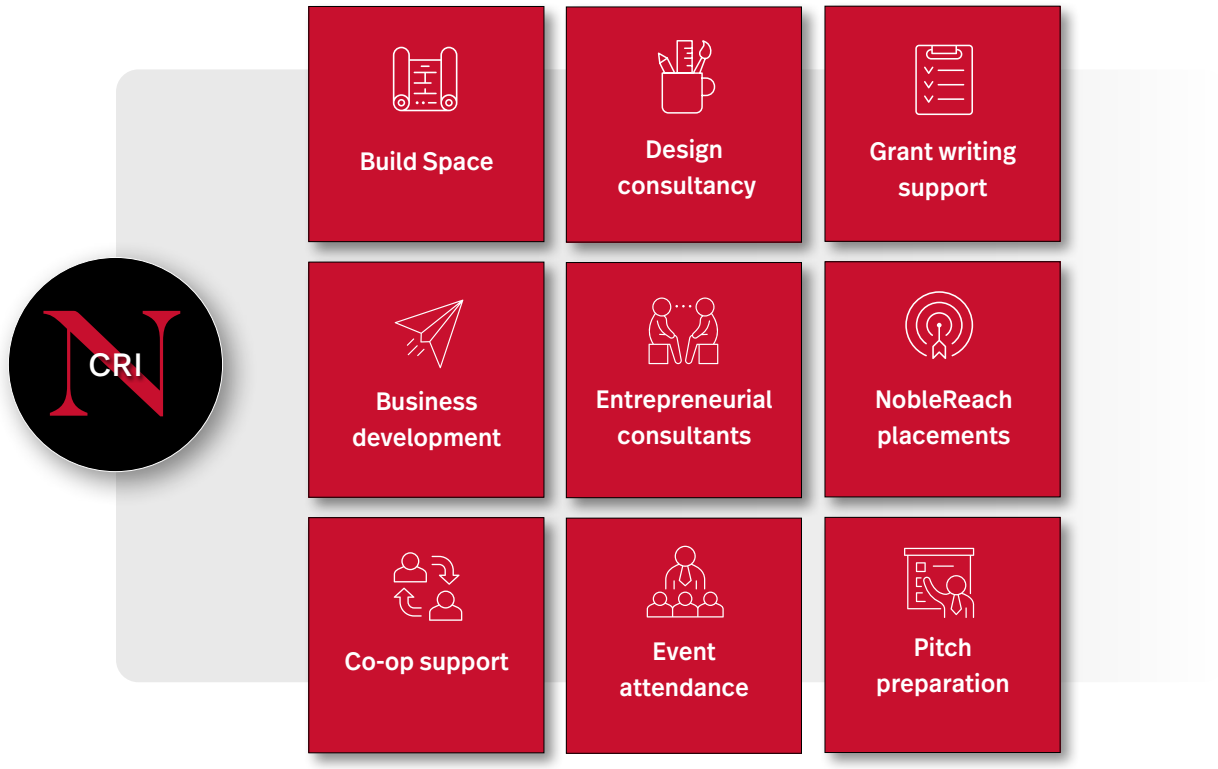
A second cohort is now underway, with four of the five companies from the first cohort continuing in the program. In the second quarter of 2026, CRI launched a joint founder education initiative with NobleReach and HBS Foundry, adding mentorship, bootcamps, and quarterly workshops to what Northeastern founders can access.

Building this infrastructure internally would require resources and networks that no single technology transfer office maintains on its own. Working through established organizations extends the range of support available to founders and allows CRI to direct its own capacity toward the work only it can do – protecting Northeastern IP and shaping ventures at the earliest stages.

NobleReach™ FOUNDATION

Venture Support in Practice

Since FY23, CRI has actively supported more than 20 spinout companies through 79 program placements spanning nine forms of support:



then → now → next

- **Building Companies, Not Just Licenses**

  2011: Success meant a signed license

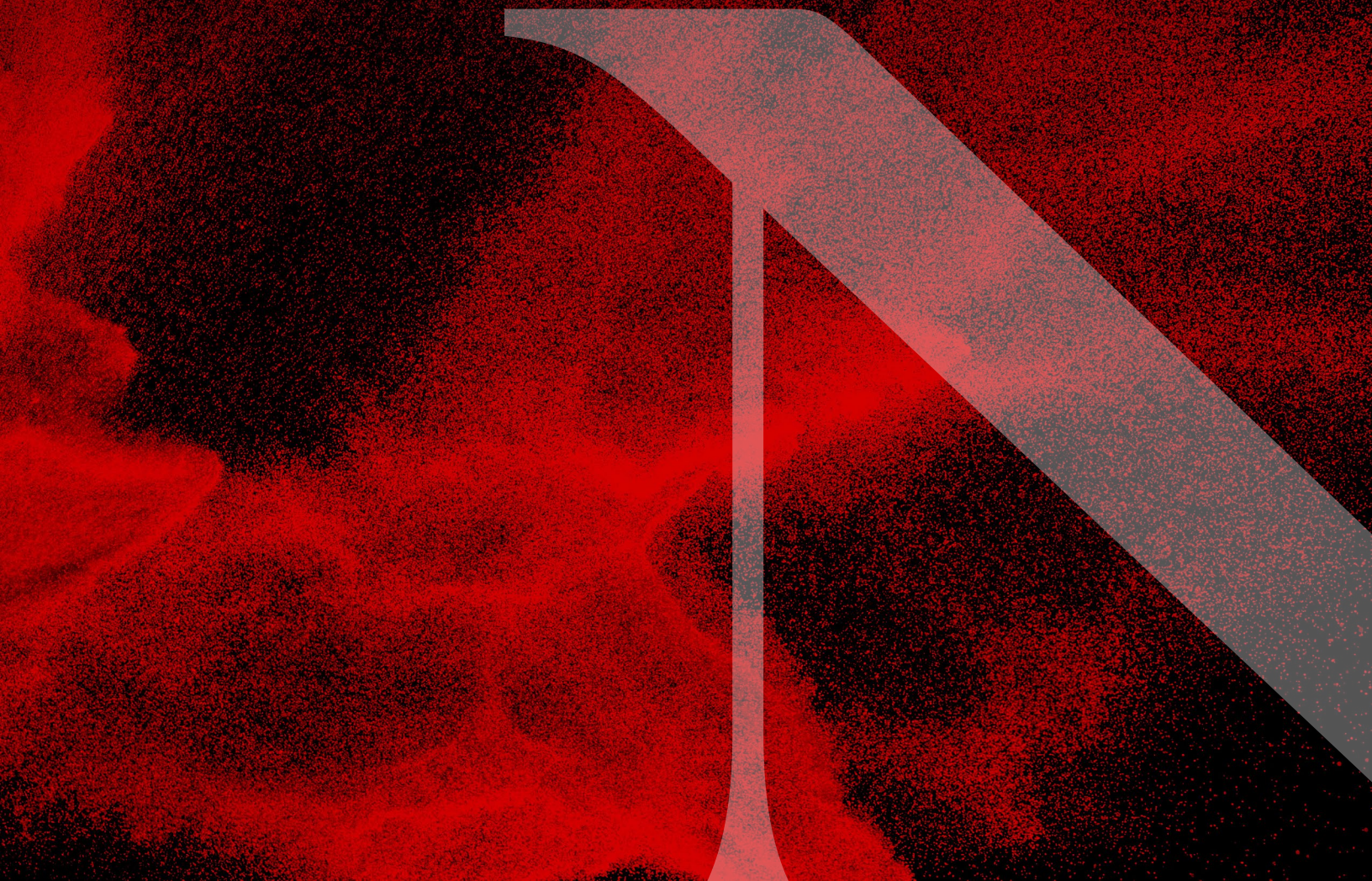
  2026: Success means a company that raises capital, hires, and reaches market

  Next: Success means a portfolio of companies that attracts investors to Northeastern on its own

Ecosystem in Action: TTVC & Venturium

Venturium FY26: A Collective Gateway for Academic Innovation

Promising ventures sit inside individual institutions, each competing separately for investor attention. Venturium exists to serve as a new gateway for ventures and investors to connect. In FY26, Venturium brought 22 spinouts from 11 research institutions to the virtual stage across two annual showcases.

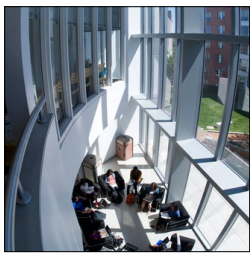
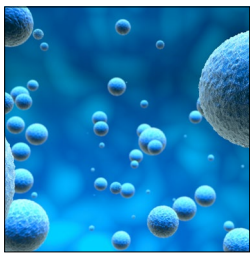
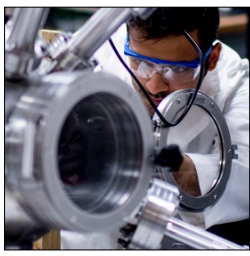


On October 30, 2025, Venturium Fall ’25 featured 14 startups working across AgTech, CleanTech, MedTech, diagnostics, and therapeutics. Participating institutions included Cornell, Rutgers, the University of Connecticut, the University of Louisville, the University of Pennsylvania, Washington University in St. Louis, and First Flight Venture Center, alongside Northeastern. BrilliantStrings Therapeutics and pacDNA represented the university on the virtual stage.

Venturium Spring ’26 followed on June 11, 2026, featuring eight spinouts across deep tech, software, diagnostics, digital health, and therapeutics, and welcoming California State University Long Beach, the University of Kentucky, and Vanderbilt into the lineup. Northeastern spinout Tadavo presented its AI platform for shortening product development cycles and forecasting market demand before development begins.

What began in 2024 with five founding universities now spans more than 25 member organizations from Massachusetts to California, each contributing ventures, reviewing deal flow, and sharing what works. A quarterly newsletter keeps more than 250 investors connected to spinouts that are actively raising capital between showcases.

READ MORE


Venturium Over the Years Snapshot

4
events since 2024

50+
spinouts featured

605
RSVPs

250+
investors receiving quarterly newsletters

10+
sponsoring TTVC organizations

340
attendees

TTVC Over the Years Snapshot

5
founding universities (2024)

25+
today, spanning MA to CA

30+
targeting by end of 2026

Ecosystem Building Over the Years Snapshot

Universities competing separately ▶ shared deal flow through TTVC ▶ reverse-pitch events and a joint stakeholder database

Commercialization: Industry & Global Partnerships

Meeting Researchers Where the Work Happens

CRI serves as the bridge between the university's research enterprise and the marketplace. Our technology evaluation efforts rely on close partnerships with colleges, institutes, and federal sponsors, while commercialization success depends on enduring relationships with industry partners. In FY26, CRI strengthened each of these connections and expanded the tools, processes, and organizational structures that make them productive and scalable.

Fifteen Years of Industry Engagement

In 2011, CRI received 57 invention disclosures from 40 principal investigators. Northeastern's Boston campus was the university's sole research campus, tens of millions of dollars in research funding supported the work, and many of the centers and institutes producing today's most commercially valuable IP had either just formed or did not yet exist. Nearly every disclosure fell into life sciences or physical sciences, with little representation from computer science.

FY26 brought 188 disclosures – more than triple the 2011 figure – and 28 of them were software inventions, evidence of a computer science portfolio that barely registered fifteen years ago. CRI's team now supports well over a hundred faculty members across IP, licensing, commercialization, spinout formation, and research funding.

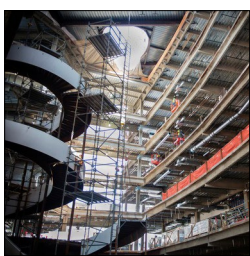
The institutional footprint behind that portfolio has expanded as well. Northeastern now operates fourteen global campuses, several producing significant research and IP, and thirty-seven interdisciplinary centers and institutes. Many were established specifically to address the technology challenges industry and government are working on now: artificial intelligence, quantum science, wireless networks, proteomics, climate technology, space, and defense.

Marketing those technologies looks different in FY26 as well. Through the In-Part platform, CRI reaches more than 6,000 companies worldwide that are actively seeking technology solutions and has received 240 introduction requests from industry to date. Alongside that, targeted campaigns focused on specific high-value segments of the portfolio have produced response rates well above what traditional outreach generates.

CRI is now positioned to pursue industry interest directly, identifying and competing for industry grants and requests for proposals. Samsung's LEAP-U program is one example, funding research into how Northeastern technology might integrate into future Samsung products. Engagement with accelerator programs including FedTech has opened another path, matching technologies with entrepreneurs to test whether a spinout is viable.



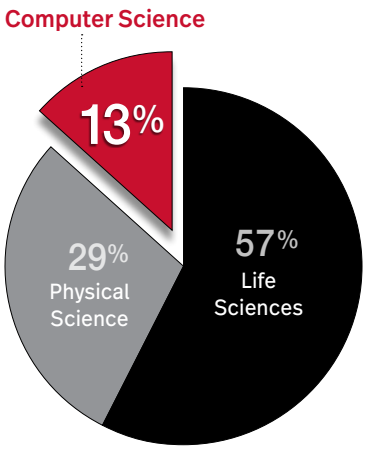




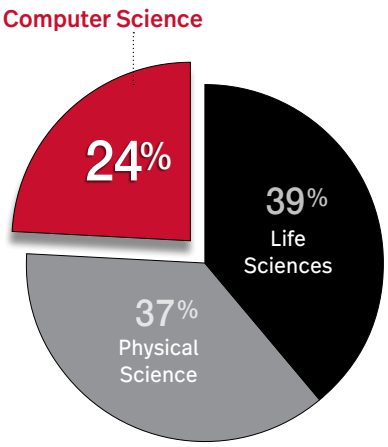
In FY26, this work is supported by AI-enabled tools. For example, TradeSpace generates IP assessment reports and quantitative metrics that inform protection and commercialization decisions, and its prospecting tools help identify the right companies to approach. Large language models assist in assessing portfolio value and mapping commercialization pathways.

Each of these advances in the portfolio, platforms, and tools has enabled CRI to pursue stronger relationships with industry to support Northeastern researchers. Fifteen years in, CRI is reaching more companies, in more sectors, with better information about where each technology belongs. The work ahead will continue to extend that reach, support more research, and create valuable licensing partnerships.

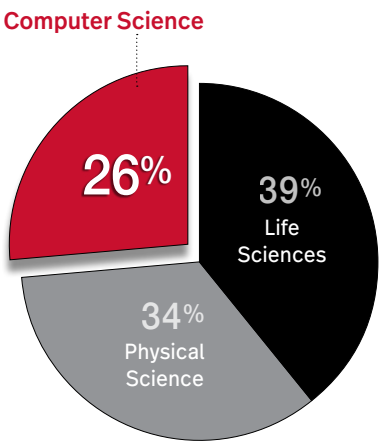
Portfolio Composition



2016—2019



2020—2023



2024—2026

Northeastern and Re:Build Manufacturing Partner to Commercialize Breakthrough Antenna Technology

Antenna technology developed at Northeastern's Kostas Research Institute (KRI) is moving toward commercial deployment, with the potential to reshape radar, sensing, and communication systems across defense and commercial markets. Through a partnership managed by CRI and the Senior Vice President for Research, Re:Build Manufacturing is now working alongside Northeastern researchers to test and refine the technology for market.

"The greatest challenge in innovation is bridging the gap between the lab and the market, and CRI has built an ecosystem that does exactly that," says Shawn P. Williams, Battery Thesis Leader, Re:Build Manufacturing.

At the center of the partnership is a Dielectric Resonator Antenna (DRA), which uses specialized ceramic and polymer materials instead of the metal conductors used in conventional designs. DRAs are efficient across a wide frequency range and compact enough to integrate directly onto semiconductor chips. The most advanced version, PA^4, packs multiple independent radiating elements into the footprint where a conventional array places one.

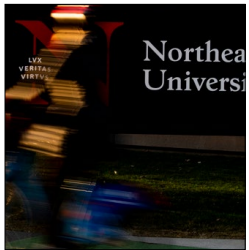
"This achieves unprecedented miniaturization while fully maintaining bandwidth and efficiency," says Kristi Pance, Principal R&D Engineer at KRI.

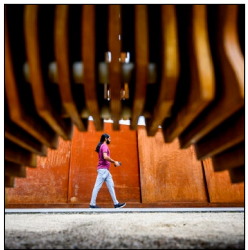
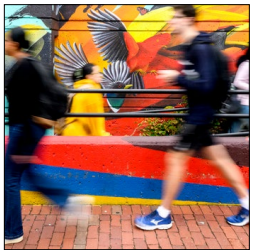
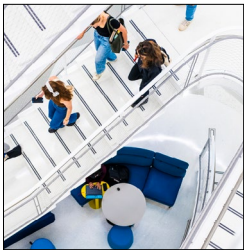
Several patent applications covering the PA^4 designs are filed through CRI, and a four-month validation program is now testing performance, manufacturability, and system integration. Re:Build is evaluating applications across communications, aerospace and defense, autonomy and mobility, sensing, and imaging, with initial commercial use anticipated within eighteen months and manufacturing committed to the United States.

The partnership runs on a new Technology Validation Agreement – a short-term, funded structure developed at Northeastern that lets a company demonstrate commercial viability before committing to a full license, while the university retains ownership of the underlying IP.

"The Technology Validation Agreement is a creative new mechanism to enable Northeastern innovation to exit the laboratory and cross the Valley of Death," says David Luzzi, Senior Vice President for Research at Northeastern.

READ MORE



Northeastern Research Heads to Orbit

Josep Jornet, Distinguished Professor of Electrical and Computer Engineering and Associate Dean of Research, is helping lead TeraLink – the first CubeSat mission designed to demonstrate sub-terahertz communications in space.

Working with NASA's Jet Propulsion Laboratory, the Air Force Research Laboratory's University NanoSatellite Program, and Northeastern's student-run Satellite Laboratory, the team is building a satellite that will establish uplinks and downlinks to low Earth orbit in the 209–240 GHz band. The mission carries $1.4 million in funding from NASA, AFRL, and NSF.

Success would ease one of wireless communication's persistent constraints – a crowded radio frequency spectrum – and open a path toward 6G satellite networks capable of delivering high-speed connectivity to remote regions and disaster zones.

Building Long-Term Industry Relationships

Samsung Research America's LEAP-U program funds later-stage academic technologies with commercial potential, advancing proof-of-concept innovations toward Samsung's future products. The program is built to run through university technology transfer offices, which identify the investigators and inventions best matched to Samsung's research priorities.

Working with Samsung's team, CRI identified Northeastern researchers working in areas aligned with the program, resulting in two funded projects and an ongoing collaboration.

"Northeastern has been fantastic to work with," says David Chang, Senior Program Manager for Emerging Tech Incubation at Samsung Research America. "We were able to identify multiple investigators leading bleeding-edge research in areas aligned with Samsung Research America's LEAP-U program."

CRI's engagement with Schneider Electric follows a similar pattern, connecting the company's teams with researchers across Northeastern's innovation ecosystem.

"I've enjoyed working with the CRI team on bigger impact, longer time horizons, and an outside-in view," says Taiil Kim, Global and Senior Director of Strategy, Business Development, and Innovation at Schneider Electric.

In a long-standing engagement, Canon Virginia has worked with Yiannis Levendis, College of Engineering Distinguished Professor of Mechanical and Industrial Engineering, since 2017. This work explores how waste plastics can be synthesized into multi-walled carbon nanotubes – transforming a disposal problem into a manufacturing input.

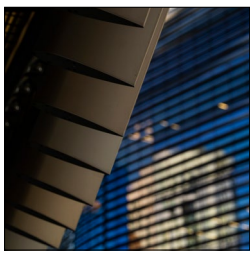
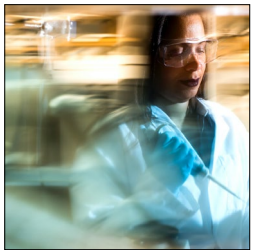
"We are deeply grateful for the university team's expertise and support throughout this initiative," says Kenichiro Iuchi, Senior Fellow at Canon Virginia. "Moving forward, we hope to continue leveraging industry-academia partnerships to drive sustainable innovation."

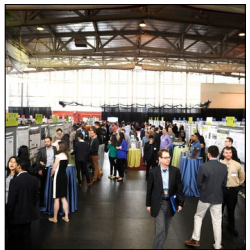
Putting AI to Work in Commercialization

CRI has adopted AI tools across several functions this year. TradeSpace, an AI-enabled IP management platform, helps the team prioritize the most promising assets based on novelty and market scores, and identify potential industry partners. AI-assisted market landscape analysis supports that work, along with the use of AI tools to develop higher-impact presentation and messaging materials for outreach.

Short-Form Video Brings Northeastern Technologies to Industry

Northeastern's In-Part portal hosts 354 licensable technologies and 17 active spinout opportunities, providing a substantial catalog for industry and investors to navigate. This year, CRI worked with student team members to produce one-minute videos that quickly and clearly communicate each technology's value. The Commercialization team uses them as a targeted outreach tool with potential partners, generating engagement on social platforms and prompting direct outreach from industry and venture capital firms within 24 hours of posting. The videos immediately offer a scalable way to promote faculty innovation and attract potential partners and investors to advance those innovations.




Supporting Innovation Across Northeastern Colleges and Institutes

CRI collaborates across Northeastern's colleges and institutes, supporting faculty through IP strategy, sponsored research funding, commercialization pathways, and venture development.

"From navigating IP considerations to helping secure sponsored research funding and providing commercialization pathways, CRI's expertise and responsiveness have strengthened the ability of Khoury College of Computer Sciences faculty to translate research into real-world impact," says Michelle Gardner, Director of Industry Partnerships and Engagement.

At the Institute for Intelligent Networked Systems (INSI), that partnership extends into venture building. **"CRI has helped accelerate the translation of INSI innovations into products, companies, and societal impact," says Ted Werth, Commercialization Executive in Residence.**

Gene Tunik, Senior Associate Dean for Research and Innovation at Bouvé College of Health Sciences, puts it simply: **"The team at CRI has been pivotal in partnering with our college around boosting innovation."**

Innovation Beyond Boston: Northeastern's Global Campus

Northeastern's global campus network is a growing source of innovation. Faculty in Seattle, Oakland, and Vancouver are developing technologies in AI-assisted medical diagnostics, content moderation for music streaming, and speech tools for people with atypical speech patterns. CRI is expanding its support to reach researchers across these campuses, with more sites to follow.

then → now → next

- **New Ways for Industry to Work with Northeastern**

  2011: Industry engagement centered on licensing individual technologies, transactional, not relational

  2026: The first Technology Validation Agreement lets a company prove commercial viability before committing to a license

  Next: Global campuses become sources of licensable technology, not just research

National Academy of Inventors

A Chapter Built for Northeastern's Inventors

The National Academy of Inventors (NAI) recognizes academic researchers whose inventions have made a tangible difference, and its annual rankings are a widely used benchmark for university innovation. Northeastern's NAI chapter, founded in 2023, gives inventors across the university a place to connect, learn from one another, and be recognized for work that reaches beyond publication. FY26 brought new Fellows, new awards, and a change in leadership – along with plans to extend the chapter's reach further across Northeastern's colleges and institutes.

Recognizing Northeastern's Inventors

On May 13, 2026, Northeastern's chapter of the National Academy of Inventors (NAI) gathered at the Alumni Center for its spring annual meeting, bringing together faculty, students, researchers, and industry partners for an evening of awards, membership recognition, and a panel discussion on research translation.

Outgoing Faculty Chair Randall Erb set the tone in his opening remarks. **"When we innovate," he said, "it is both the act of invention and knowing how to extract value from that invention – and having the network around us to be able to do that in a meaningful and impactful way."**



- **Innovation Impact Award for Faculty**
  Josep Jornet, Associate Dean of Research and Distinguished Professor of Electrical and Computer Engineering, received the Innovation Impact Award for Faculty for his work in terahertz communications and 6G systems. He holds more than $30 million in federal research funding and recently incorporated Teradio, a spinout applying terahertz technology to high-speed data center communications.



- **Innovation Impact Award for Students**
  Amr Makhamreh, a PhD candidate in bioengineering in the Wanunu Lab, received the Innovation Impact Award for Students. He develops nanopore technologies that read individual proteins and RNA modifications at single-molecule resolution, with implications for diagnostics and cancer research, and his work has been published in Nature Biotechnology.



- **Emerging Visionary Award**
  Pedram Johari, Principal Research Scientist in Electrical and Computer Engineering, received the Emerging Visionary Award. He leads two spinouts originating from federally funded Northeastern research: one developing AI-driven seizure prediction for drug-resistant epilepsy, another focused on digital-twin modeling for wireless networks.





2026 NAI Fellows

Two faculty were announced as newly elected NAI Fellows, the Academy's highest distinction: Gregory Abowd, Dean of the College of Engineering, recognized for decades of work in ubiquitous computing, including landmark research connecting technology to autism; and Mansoor Amiji, Professor of Pharmaceutical Sciences, recognized for a career in nanomedicine and targeted drug delivery spanning more than 400 publications.



2026 NAI Senior Members

Aatmesh Shrivastava, Assistant Professor of Electrical and Computer Engineering, was named to the 2026 class of NAI Senior Members for his work in low-power circuit design, backed by 22 granted patents.

A Transition in Northeastern's NAI Chapter Leadership

The meeting also marked a change in chapter leadership. Randall Erb, Faculty Chair for two years, stepped down to return his attention to his research and to Fourier, a Northeastern spinout. During his tenure, faculty and student membership grew and event attendance rose. He also introduced a "faculty hotseat" model, in which each Innovation Board member takes ownership of one event from topic selection through execution, distributing responsibility so the chapter's momentum does not depend on any single person.

Yunume Fitchorova steps into the role as incoming Faculty Chair. A founding member of the chapter's Innovation Board, she is Principal Engineer and Director of Materials and Devices at the Kostas Research Institute, where she has spent more than 15 years working on magnetic, multiferroic, and multifunctional metamaterials with applications in defense, radar, and next-generation RF systems. Her priorities include extending the chapter's reach across Northeastern's colleges and institutes, strengthening mentorship, and supporting translational research.

READ MORE

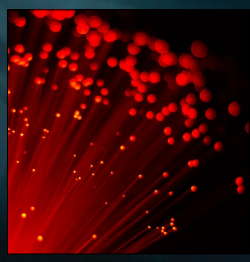
Northeastern University
Chapter of the National Academy of Inventors

JOIN TODAY

Northeastern's NAI Chapter Since 2023

- **Founded: January 2023**, launched by CRI with founding co-chairs Vincent Harris and Jennifer Boyle-Lynch
- **Membership: 60** chapter members | **16** NAI Fellows | **53** students
- **National Standing: 41st** among the **Top 100 U.S.** patenting universities – and **4th** among private universities without a medical school, behind only MIT, Caltech, and Carnegie Mellon







INGENUITY

Faculty & Inventor Spotlights

Recognition and Technologies on the Move

Northeastern inventors are recognized for their groundbreaking work as their technologies continue to advance toward commercialization. The pages that follow feature both recent recognition for Northeastern inventors and a selection of technologies CRI is actively promoting to industry and investors.

Spinout Zepsor Moves Toward Market

Zepsor Technologies, born out of Northeastern's SMART Center, is preparing to put zero-power infrared sensors in customers' hands. After years of refining the technology with chip foundry partners, the company is shipping prototypes to potential customers – advancing from a licensed university technology to a commercial product.

The sensors draw no standby power at all, using the infrared radiation emitted by a human body to trigger a micromechanical switch.

"Our sensors are 'off-but-alert,'" says Zhenyun Qian, Associate Research Professor of Electrical and Computer Engineering and Zepsor's chief technology officer. "They do not drain any battery power to continuously monitor the environment but are still capable of detecting and discriminating against the IR radiation emitted by a human body or other IR-emitting objects."

Co-founded by Zhenyun Qian and Professor Matteo Rinaldi, Zepsor holds an exclusive license to multiple Northeastern patents and has drawn on CRI's Spark Fund, alongside funding from DARPA, NSF, and ARPA-E. Its sensors extend battery life by five to ten times compared to conventional infrared alternatives, with applications in presence detection, flame sensing, and touchless interfaces.

Invented Here! Honors Three Northeastern Teams

Three groups of Northeastern inventors were honored at the Boston Intellectual Property Law Association's 15th annual Invented Here! program, which recognizes New England's most significant recent patents. Honorees included Alireza Ramezani; Ke Zhang and Xueguang Lu; and Srinivas Sridhar and Codi Amir Gharagouzloo. Selection is competitive – judges review thousands of patents granted across New England each year and select roughly a dozen to honor.

Technologies Ready for Partnership

Albert-László Barabási – Scale-Rich Materials

Engineered materials have long relied on repeating patterns. Those uniform designs concentrate stress at predictable points, limiting performance and allowing failures that arrive without warning.

Albert-László Barabási, Robert Gray Dodge Professor of Network Science and University Distinguished Professor, and his team have developed an alternative. Scale-rich materials are architected networks built without repeating unit cells, drawing on the structure of complex systems in nature. The result distributes stress evenly across the material, resists catastrophic failure, and allows strength and thermal performance to be tuned to the application.

Potential uses span lightweight aerospace components, next-generation protective gear, and heat sinks for high-performance electronics.

Francesco Restuccia – SiMWiSense

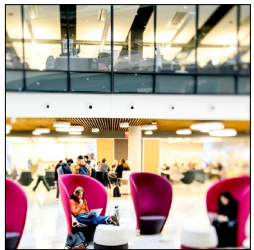
Systems that recognize human activity through Wi-Fi signals typically track one person at a time, and they struggle to adapt when the environment or the people in it change.

Francesco Restuccia, Associate Professor of Electrical and Computer Engineering, and his team have developed SiMWiSense, which reads channel state information from existing Wi-Fi infrastructure to detect the activities of multiple people simultaneously – passively, non-invasively, and without cameras or wearables. Paired with few-shot learning, the system adapts to new environments using minimal data, making it a candidate for privacy-preserving sensing in smart homes, healthcare, security, and retail analytics.

Restuccia's work has been widely recognized, including a 2026 Army Research Office Young Investigator Award and a 2025 DARPA Young Faculty Award.








Leila Deravi – Enhanced Natural Colorants

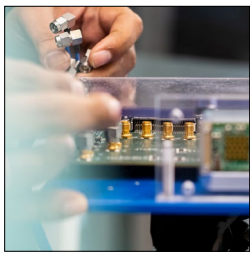
Natural colorants struggle to compete with synthetic dyes. They degrade quickly, offer a limited range, and lose brightness under light, heat, or shifts in pH – which makes them hard to scale for food and consumer products.

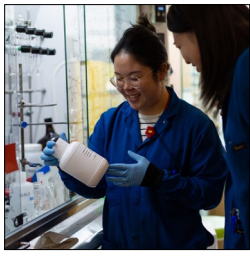
Leila Deravi, Associate Professor of Chemistry and Chemical Biology, and her team have developed an approach that guides natural color molecules to self-assemble through controlled crystallization, forming edible photonic nanostructures. The result is a brighter color, improved stability, and a longer shelf life, achieved through nature's own chemistry rather than synthetic alternatives.

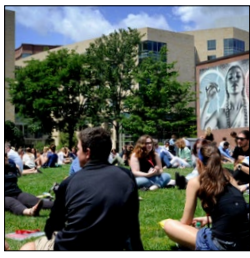
The work draws on years of research into cephalopod pigments in Deravi's Bio-Inspired Material Design Laboratory. Core technology has pending U.S. and European patent applications, and the team placed second in the MassCEC and FedTech ClimateTech Studio program this year. Applications span food-safe colorants, natural dyes, and pigments for color cosmetics.

Deravi's lab has also produced a spinout, Seaspire Skincare, which is developing squid-derived colorants for personal care applications.













Tali Konry – Single-Cell Functional Immunomics

Immunotherapy works by enlisting the patient's own immune system, but predicting which patients will respond remains difficult. Most analytical tools describe what immune cells contain rather than what they actually do.

Tali Konry, Chair of the Department of Pharmaceutical and Biomedical Sciences, and her lab have developed single-cell platforms that monitor immune cell behavior in real time while preserving the biological context required for molecular analysis. The approach, which the lab calls functionomics, works from the bottom up – identifying functions already present in the body, then engineering cells around what that analysis reveals.

The applications run from earlier cancer detection to more precisely targeted immunotherapies. Konry holds intellectual property across single-cell analysis, organoids, and cell therapy development, and her research has been supported by the NIH, NSF, the American Heart Association, and Sanofi's iDEA award.

The patented technology behind this work has been translated into a spinout, Feromics Inc., which combines functional single-cell assays with AI and machine learning analytics for immunotherapy.

Meni Wanunu – Single-Molecule Protein Sequencing

DNA and RNA sequencing have advanced rapidly over the past decade, yet protein sequencing remains a frontier. Only a handful of researchers worldwide are currently working to read a full-length protein molecule from beginning to end and decode its sequence and modifications.

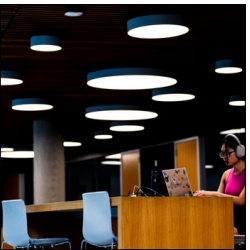
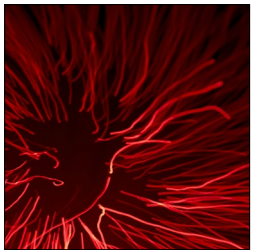
Meni Wanunu, Professor of Physics and Bioengineering, is one of those researchers. His Nanoscale Biophysics Laboratory uses nanopores, tiny holes that biomolecules pass through and produce distinct electrical signatures as they do, to decode molecular sequences. A second line of work applies waveguides to enzymatic processes, using reverse transcription to sequence RNA molecules.

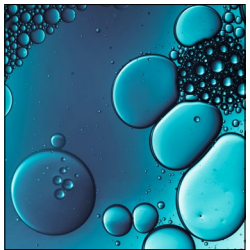
When biomolecules within a cell are structurally aberrant, disease often follows. Reading those molecules one at a time and identifying where the errors are opens a path to detecting disease before symptoms appear.

Wanunu's lab is developing the underlying intellectual property alongside the technology, with the goal of devices used first by academic researchers, then in clinical settings, and eventually for personal health monitoring.

Stewardship of Federally Funded Research with iEdison

With 60 percent of Northeastern's disclosed technologies carrying federal funding, compliance is a substantial part of CRI's work. Under the Bayh-Dole Act, universities retain ownership of inventions made with federal support but take on reporting obligations in return, tracking each invention from disclosure through patenting and commercial use. CRI manages that reporting through iEdison, the federal system agencies use to monitor the public return on research investment.




CRI Academy & Learning Engagement

CRI Academy: Building Commercialization Fluency Across Northeastern

CRI Academy is Northeastern's online training series for researchers navigating the path from discovery to market – covering intellectual property fundamentals, the disclosure and patenting process, licensing pathways, and the funding and venture support available through CRI. Since launching, the Academy has drawn 116 enrollments, and researchers completing the course earn an average grade of 91 percent.

Today, the CRI video library holds 145 videos, spanning technology showcases, Academy modules, student spotlights, Spark Fund features, and event coverage – a shift in how CRI reaches researchers, industry, and the public. The Academy complements CRI's broader educational outreach, which includes customized presentations to departments, live webinars, and in-person workshops throughout the year.

Whether you're a seasoned innovator or new to tech transfer, CRI Academy offers an accessible path to understanding the research commercialization ecosystem.

Enroll Today:

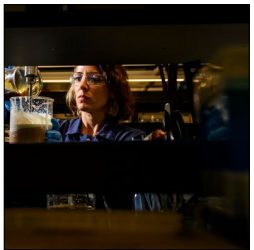
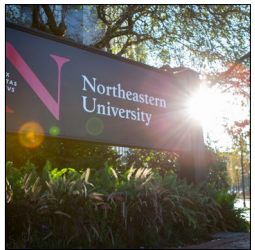
CRI ACADEMY

Students at the Center of Commercialization

Northeastern students don't just learn about technology transfer – they do the work. Over the past 15 years, 94 students have completed co-ops at spinout companies, working inside businesses built on research from their own university. Others join CRI directly as Commercialization Specialists, a program launched in 2022 that brings PhD and master's students onto the team to evaluate technologies, analyze markets, and translate research for industry audiences.

"I've learned to hone in on what makes a technology particularly unique and special, and how to succinctly package that into material that's going to sell that technology to potential industry partners," says Jane Lee, a fourth-year PhD student in Mark Niedre's lab and a CRI Commercialization Specialist. "I've also learned a lot about making connections with people in industry – what they're looking for, and what values they're seeking in the technologies we have here at Northeastern."

The experience runs both directions. Students bring technical depth to CRI's portfolio work and leave with commercial skills that are uncommon in their fields.



What's Next: The Next 15 Years of CRI

Looking Ahead

Over 15 years, CRI has piloted and launched dozens of programs aimed at filling gaps in the commercialization ecosystem – gap funding when promising research stalled before it could attract investors, venture support when founders needed more than a license, and a national consortium when individual universities were competing separately for the same investor attention. The next 15 years will follow the same simple premise: CRI will continue to identify what researchers need, and then build it.

CRI is prioritizing deeper engagement with industry and investors, expanding the relationships that carry technologies from disclosure to market. The team is also making strategic improvements to an already robust patent portfolio, and extending its support across Northeastern's global campuses, where faculty in Oakland, Seattle, and Vancouver are developing technologies that will need the same infrastructure Boston researchers have had for 15 years.

Alongside that work, CRI continues to expand the tools available to researchers and partners – including new contracting structures that let a company evaluate a technology's commercial potential before committing to a full license, and AI-enabled systems that support disclosure and help the team identify which technologies merit deeper investment.

The Technology Transfer Venture Consortium is growing as well. What began in 2024 with five founding universities now spans more than 25 member organizations, with a target of 30 or more by the end of 2026. Planned developments include a reverse-pitch model, in which investors present what they are looking for, and a stakeholder database shared across member institutions.

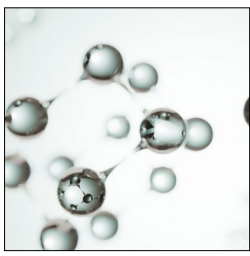
More than 45 Northeastern spinouts are currently in initial funding stages, and researchers across the university are advancing work in fields that did not exist as commercial categories 15 years ago – AI, quantum, climate technology, proteomics.

None of this happens in isolation. Technology transfer is how publicly funded research becomes products, companies, and jobs, and it depends on a wide community: researchers willing to think beyond the lab, colleges and institutes that make introductions, industry partners who take on early-stage technology, and investors who back it before the outcome is certain. CRI relies on the experience, enthusiasm, and generosity of those partners to move technologies from the lab to the market.

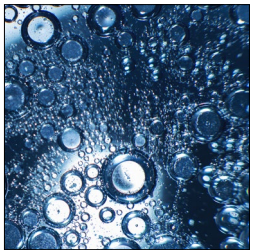
The next chapter depends on the people willing to build it alongside the university.

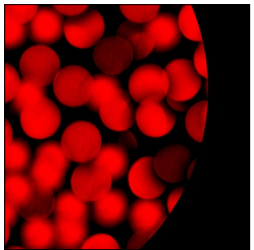
LEARN MORE

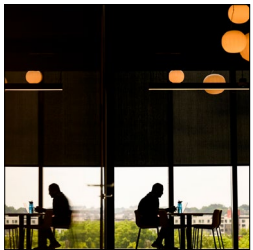














CRI Team



Jennifer Boyle-Lynch
Executive Director

The CRI team is agile and responsive–focused on the translation of university innovations into tangible solutions through licenses, spinouts and collaborations. Our dedication to establishing ongoing dialogue with industry informs Northeastern's progressive research, enabling a productive balance between exploration and implementation.

INTELLECTUAL PROPERTY AND CONTRACTS



Andy Curtin
Director
Intellectual Property



Elmira Zenger
Associate Director
Intellectual Property &
Contracts Counsel



Monika Kasprzak
Patent Administration
Manager



Melissa Franks
Patent Compliance
Manager



Lelia Leite
Contracts Administrator

COMMERCIALIZATION



Nancy Wetherbee
Director
Commercialization



Mark Saulich
Associate Director
Commercialization

VENTURE DEVELOPMENT



Katie Hemphill
Director
Technology Ventures
and Talent Network

MARKETING AND PROGRAMS



PJ Dupuis
Assistant Director
Marketing & Programs

FINANCE AND OPERATIONS



Veronique Corrdin
Associate Director
Finance & Operations



Jacqui Mitchell
Technology Transfer Data
& Operations Analyst



James Ssemata
Finance & Operations
Associate

PARTNER WITH US | SUBMIT DISCLOSURE | STAY IN TOUCH

Follow us:



Northeastern University
Center for Research Innovation

101 Belvidere Street, 2nd floor
Boston, MA 02115
617.373.8810
cri@northeastern.edu

cri.northeastern.edu