CREATING IMPACT FROM UNIVERSITY INNOVATIONS

Northeastern University’s Center for Research Innovation (CRI) is an impact-driven initiative bridging the gap between laboratory research and need-based solutions. The CRI serves as the University-wide portal between industry and leading-edge innovations from Northeastern’s use-inspired research portfolio. A majority of the CRI staff has prior entrepreneurial experience, creating an agile and responsive team focused on the translation of University innovations into tangible solutions through licenses, spinouts and collaboration. The CRI’s dedication to establishing ongoing dialogue with industry informs Northeastern’s progressive research, enabling a productive balance between exploration and implementation.
With a generous gift from alumnus Richard D’Amore (’76), the Center for Research Innovation was formed in 2011 based on D’Amore’s vision of accelerating impact from Northeastern University innovations. The Northeastern landscape is exploding with new ventures and creative industry relationships as D’Amore’s vision continues to manifest.

The Center for Research Innovation (CRI) takes its motto of “Innovation as a Catalyst; Entrepreneurship as a Mindset” to heart. Our entrepreneurial staff continues to challenge itself to rise to the next level of excellence in our service to the University. We’ve added staff members to deepen our relationships with industry partners, implemented a pilot venture-funding initiative, and partnered with our campus colleagues to develop and launch a portal to support alumni-mentoring of early stage ventures. The momentum culminates in the high energy Research, Innovation & Scholarship Expo (RISE), which has grown to be the largest event of its kind over the past two years.

With a firm operational foundation and an ambitious vision for the future, the Center for Research Innovation is pleased to share the past year’s successes born of productive collaborations and effective teamwork across the University. Continued development of resources for our startups around mentoring, funding and commercialization needs set the bar high for the upcoming year, and it is a challenge we are inspired to meet.

The second year of CRI operations confirm what D’Amore and so many alumni have known all along; Northeastern is a community of innovative problem solvers and entrepreneurial spirits. The energy is palpable, and the momentum... unstoppable!

Tracey Dodenhoff
Director
COMMERCIALIZATION PROCESS

Commercialization is the process of translating innovative research into high-impact solutions through industry relationships and/or spinout vehicles.

- Research
- Scouting
- Invention
- Disclosure Form
- Assessment
- Protection
- Marketing
- License to business or formation of a spinout business
- Commercialization
- Revenue
- Reinvest in commercialization
INVENTION DISCLOSURES

Invention disclosures are where the glimmer of impact begins. They represent the identification of a new approach to a problem, and are the lifeblood of any innovative and entrepreneurial ecosystem. The CRI has made a dedicated effort to ensure that the disclosure process is transparent for inventors, and the effort has manifested in a dramatic increase in disclosure rates.
A patent application is the first “line in the sand” regarding inventorship. Our new staff includes a licensed patent attorney, making the cost of filing an initial “Provisional Patent Application” low enough that it can be incorporated as part of our standard intake routine. This means that inventors have more options early on regarding publications, collaborations, and discussions around their inventions without the risk of losing intellectual property.
CRI has established a robust patent analysis and commercialization review process as standard operating procedure. The number of patent applications that continue through the process will be focused on those having the greatest chance of defensible patent protection and commercial viability, optimizing the value for both the inventor and the University.

07/03/12 Patent No. 8,211,765
Bi-Stable Nanoswitch

07/31/12 Patent No. 8,231,070
Devices, Methods and Applications for Extraction of Molecules from Polymeric Gel Electrophoretic Media

12/25/12 Patent No. 8,338,570
Collagen Fibrillar Construction

01/29/13 Patent No. 8,362,618
Three-Dimensional Nanoscale Circuit Interconnect and Method of Assembly by Dielectrophoresis

04/23/13 Patent No. 8,428,320
Method of Reconstituting Cellular Spectra Useful for Detecting Cellular Disorders

05/07/13 Patent No. 8,438,513
Quantifier Elimination by Dependency Sequents

05/28/13 Patent No. 8,449,427
Sequential Planetary Stack Transmission System

05/28/13 Patent No. 8,448,456
Systems, Methods and Devices for Frozen Sample Distribution
INDUSTRY ENGAGEMENT

The Center for Research Innovation hosted more than ten global companies in Fiscal Year 2013 with combined annual revenues exceeding $300 Billion and R & D budgets approaching $10 Billion.

This industry-centric approach contributed to the creation of the Rogers Innovation Center located at the George J. Kostas Research Institute for Homeland Security (KRI) in Burlington, MA. Rogers Corporation (NYSE:ROG) has committed to providing substantial, multi-year funding allowing Rogers and Northeastern to leverage their complementary research and development initiatives in advanced materials in partnership with KRI. A progressive IP policy, rapid turn-around in negotiations, and seamless integration between the academic, administrative and corporate stakeholders led to the partnership and serves as an example of Northeastern’s agility when translating innovations from lab to market.

The CRI increasingly continues to develop and cultivate its industry relationships and looks forward to creating even more impactful partnerships and creative solutions in the upcoming year.

ROGERS INNOVATION CENTER

ESTABLISHED 2013
LICENSE REVENUE

As with any operation focused on commercial outcomes, revenue generation is an important litmus test. In a turn-around situation, the financial measurements become even more telling as the operations move from a cost center to a revenue center. With the operational foundation firmly established, the CRI is starting to see evidence of a healthy financial dynamic emerging.

$461,438
INCOME 84% INCREASE

$170,839
REIMBURSEMENT RECEIVED 31% INCREASE
84% INCREASE IN REVENUE
FY2013 RECORD NUMBER OF INVENTION DISCLOSURES AND PATENT APPLICATIONS
INNOVATOR’S TOOLKIT DESIGNED TO ASSIST WITH THE COMMERCIALIZATION PROCESS

20% INCREASE IN SPINOUTS
TECH PUBLISHER LAUNCHED FOR PROMOTION OF NORTHEASTERN TECHNOLOGIES
DISCLOSURES PER $1M OF RESEARCH FUNDING INCREASED BY 10%
INNOGET CLOUD BASED SOFTWARE TO PROMOTE TECHNOLOGIES TO GLOBAL CORPORATIONS

ROGERS CORPORATION INNOVATION CENTER AT THE GEORGE J. KOSTAS RESEARCH INSTITUTE FOR HOMELAND SECURITY
VENTURE CATALYST PILOT AND VENTURE CROWD LAUNCH
PARTNERSHIP WITH HSE:MENTOR NETWORK
Spinout companies are a key element for manifesting innovations in the marketplace. The program introduced by the CRI are engineered to accelerate the pace of spinout activity, involving partnerships across the colleges and alumni and student organizations.

3-Spark, LLC
Andros Robotics, LLC
MazeFire, LLC
Menon Laboratories
Neurofieldz, LLC
Zephyr Energy Corporation

20% INCREASE
NEUROFIELDZ

NeuroFieldz, Inc. aims to become a leader in the rapidly growing area of brain monitoring applied to human performance, well-being and mental health. NeuroFieldz technology enables functional brain imaging at high temporal and spatial resolution better than current EEG or MEG. The advantages of NeuroFieldz technology will have significant impact on detecting and treating a wide range of neurological conditions including epilepsy and traumatic brain injury as well as in brain computer interfaces.

ANDROS ROBOTICS

AndrosRobotics LLC is focused on providing rehabilitation hospitals and outpatient clinics with a unique device for gait retraining after stroke. There exists an opportunity in physical rehabilitation due to the prevalence of stroke (800,000 annually in the U.S.) and insufficient technological solutions currently available. Body weight support systems have high market penetration despite their inability to reduce labor cost associated with gait rehabilitation. Our product will do exactly that.

www.androsrobotics.com
With 900 student and faculty participants presenting 400 innovations to 2000 attendees, RISE:2013 has grown to be the largest university research expo of its kind. In only its second year as the rebranded “Research, Innovation and Scholarship Expo”, the event attracted 90 judges, more than 70% from industry. The expo culminated in an awards reception honoring the top scorers for excellence in Research, Innovation and Scholarship, as well as the People’s Choice Award for Greatest Entrepreneurial Potential.

The Center for Research Innovation continues to cultivate Northeastern University’s innovation community to increase visibility and engagement. RISE:2013 included a pitch training workshop, an online judging system, as well as a mobile app for viewing all the abstracts and seamless navigation through the facility.
2000 Attendees
86 Judges

44% Increase in External Judges

Approximately Four Hundred Abstract Submissions

First Rise Mobile App

First Pitch Training Event Hitting Your Target
VENTURECROWD

VentureCrowd is a Northeastern University spinout focused on forging valuable connections between entrepreneurial thinkers, innovative visionaries, and experienced mentors. The goal? Sustainable, accelerated venture creation. Rolled out at RISE:2013, VentureCrowd’s web-based platform continues to develop as a core connector for alumni interested in mentoring young entrepreneurs, and entrepreneurs seeking to leverage Northeastern’s deep talent pool.

www.myventurecrowd.com

VENTURE CATALYST PILOT PROGRAM

Northeastern’s entrepreneurial ecosystem would not be complete without a dedicated funding program to spark the translation of technologies to the marketplace. With our Venture Catalyst pilot program, the CRI identifies promising technologies and pairs them with promising entrepreneurs. In partnership with individual colleges, the Health Science Entrepreneur Mentoring Program, and IDEA, the student run venture accelerator, start-ups are fast-tracked to develop an industry relevant prototype and companion business plan, positioning them for first revenue or first funding. This holistic venture support model is manifesting in Northeastern’s rapid climb to the top of the University spinout rankings.
In the Fiscal Year 2012 Annual Report, CRI highlighted two of Northeastern’s promising spinouts. During the past year, these two companies have been hard at work, developing their products and further developing interest in their companies.

3-SPARK

3-Spark, LLC, has created a new 3D Printing Technology able to build parts which have electronics and sensors contained inside. In its first year, 3-Spark has completed a prototype, become a finalist in the Mass Challenge Accelerator Competition, has been invited to pitch to eight Venture Capital firms, and has gained exposure in magazines and articles all over the globe. They are now in the process of expanding their team.

ZEPHYR ENERGY CORPORATION

Zephyr Energy Corporation is an alternative energy company revolutionizing wind energy harvesting with its non-rotating wind energy generator technology. Zephyr is currently developing and has made significant progress on a beta prototype, partnered with the NU Gordon Engineering Leadership Program, was a semi-finalist in the Mass Challenge Accelerator Competition and invited to pitch at the Boston Future Energy Pitch Event and the IDEA Pitch-a-Thon. They are now in the process of demonstrating scalability.