



Emera
ideaHUB
DALHOUSIE UNIVERSITY

2020/2021 Impact Report



When I reflect on the Faculty of Engineering a few short years ago, it was a very different place. While the IDEA Project and the Emera ideaHUB transformed and revitalized our campus, it has also provided our faculty with a greater sense of community that stretches beyond our physical space.

This growth and transformation has been, and will continue to be, the catalyst for the increasing role the Faculty of Engineering will play in the community and economic impact in Atlantic Canada and beyond. The Emera ideaHUB is an engine for growth. Our impact would not be possible without your steadfast support and the leadership, influence, and landmark contributions of donors like you. Thank you.



Through the generosity and ongoing support of our donors, we now have a space that not only accommodates our increasing number of engineering students, but also offers a creative teaching environment that will nurture future entrepreneurs and innovators. The Emera ideaHUB has provided an environment and support team where companies can be built, grown, and positioned to thrive.

As we come to a natural transition point out of pandemic life and into a new normal, this report will provide a look back not only on the 2020-21 operations of the Emera ideaHUB, but also on the cumulative results of our organization to date. Your gift has empowered this success.

The research and new technology born at the Emera ideaHUB has put Atlantic Canada on the map for innovation globally. Due to our unique position as part of Dalhousie, the Emera ideaHUB facilitates collaboration among researchers in engineering, the combination of core competencies across other departments such as oceans, medicine, and agriculture, and a bridge from research labs to real-world application.

With our engineering student population now close to 2,700 students, we continue to enhance our curriculum and strengthen our teaching and research on Sexton Campus. The Emera ideaHUB creates educational experiences, mentorship opportunities, a united community focused on innovation, and a chance to learn unique transferable skills. Our donors commitment to student excellence has always played an influential role in developing our students—future engineers— and providing our faculty with the resources to enhance their experiences on campus. For that, we are immeasurably grateful.

Dr. John Newhook Dean, Faculty of Engineering

A handwritten signature in blue ink, reading "John Newhook". The signature is fluid and cursive, with a long, sweeping underline that extends to the left.



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AN ENGINE FOR GROWTH IN ATLANTIC CANADA

The Emera ideaHUB was built with the purpose of enabling early-stage product innovation. In only two years, we have helped 54 start-ups create 106 new jobs and secure \$28 million dollars in funding. As companies progress through our programming, that funding transitions from grants and awards to financing from venture capital and angel investors. Perhaps most notably, \$4 million of the funds raised were generated by product revenue and paid pilots, which are a pivotal moment for tough technology companies.

In year one of the Emera ideaHUB, our 19 client companies were able to raise \$5 million in funding. In our second year, we welcomed 35 start-ups into our facility who raised \$23 million, surpassing the annual goal of 20 start-ups and \$15M raised. And it's not the only giant leap we've taken. In 2019-20 our ventures created 20 new jobs, and in 2020-21 that number increased to 86. That means that at the end of year 2, we've already hit 42% of our 5-year target for job creation. It also means that in year one Emera ideaHUB companies generated \$1.48 million in taxable income added to the Canadian economy. In year two another \$6.36 million in taxable income was generated by our companies.

Financial growth is not the only place where we are seeing big numbers. We've also seen tremendous growth in the development of new intellectual property (IP) and in the R&D that is necessary to develop these new ideas. In two years, Emera ideaHUB start-ups are on track to exceed our 5-year goal for formal IP protection with 62 formal IP filings. Our companies spend about 50% of their funding on R&D expenses, much of that spent in collaboration with Dalhousie researchers. In year two, we saw R&D spending with Dalhousie increase from the \$750k of 2019-20, to \$3.9 million in 2020-21. That total of \$3.9 million represents 14% of all of Dalhousie's industry collaborations annually.

Thanks to the vision and leadership of our investors/supporters, our companies are accessing the support they need to build their novel ideas into thriving businesses that will continue to drive economic impact in Atlantic Canada for years to come. Together, we believe the Emera ideaHUB can be recognized within our region and even across Canada as an engine for growth. We have a vision to be the leading tough tech incubator in Canada by 2030 recognized by future founders and established technology entrepreneurs alike, as well as by tech investors and industry leaders. With your partnership, we're poised for impact.

2019/2020
19
STARTUPS
SUPPORTED

2020/2021

35
NEW STARTUPS
SUPPORTED

100
5 YEAR GOAL

At the end of year 2 we have already completed 54% of our 5 year target for total startups supported.

\$28M
TOTAL FINANCING
SECURED BY STARTUPS



INTELLECTUAL
PROPERTY



116
Trade
Secrets

37
Patents

10
Copyrights

15
Trademarks

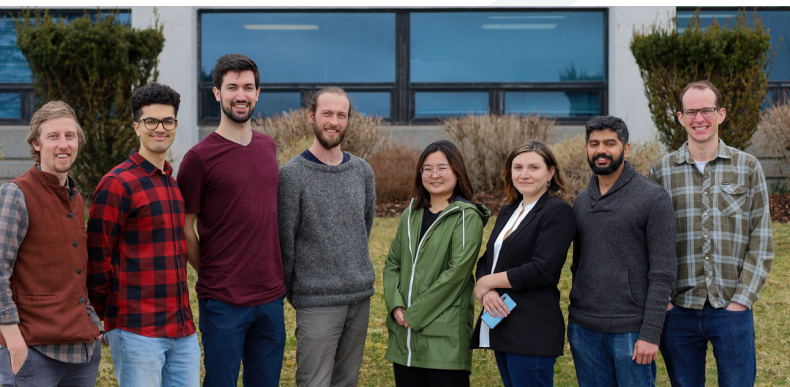
106 NET NEW
JOBS CREATED



GROWTH ACROSS INDUSTRIES: IMPROVING OUR DAILY LIVES

The Emera ideaHUB focuses on early-stage product innovation, which means we are industry agnostic, focusing on any tough tech ideas that need the equipment, expertise, and space to go from vision to reality. With client companies impacting everything from agriculture to health and medicine, and from oceans to advanced manufacturing, we are creating the conditions for founders to change the way we work, survive and thrive.

INDUSTRY SPOTLIGHTS

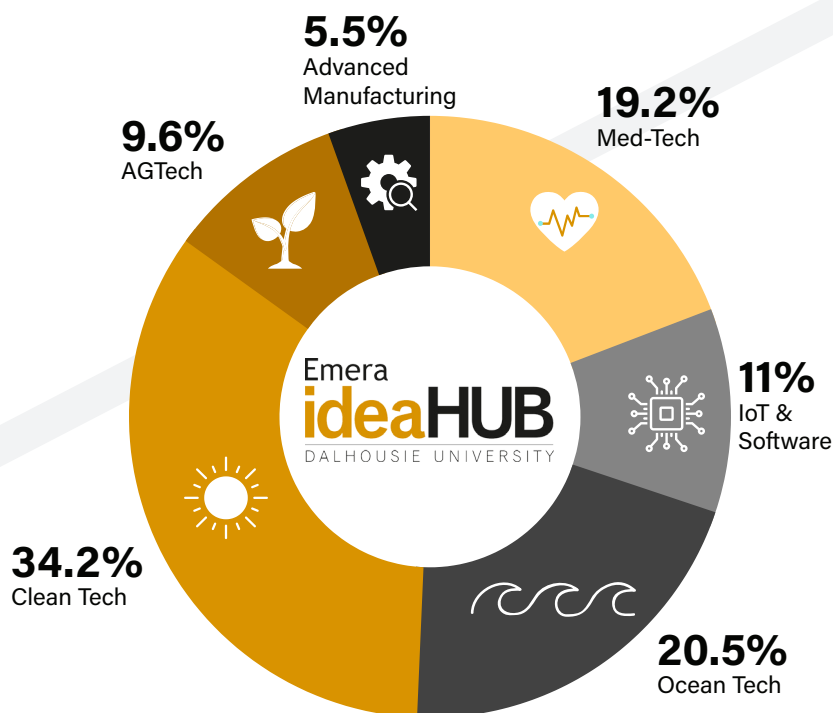


Rayleigh Solar Tech

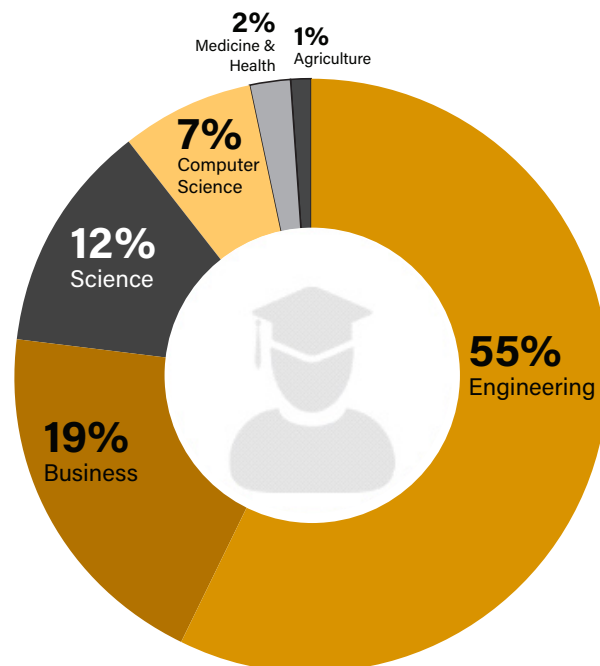
"The Emera ideaHUB has been instrumental to our success. If it weren't for the HUB team's support, the company would not have achieved the same growth. Not only did they give us a home, but they helped refine our 3D printing specifications, and they were invaluable in providing advice in navigating funding programs such as Mitacs, and in structuring our intellectual property agreements with Dalhousie."

- Dane George, Co-Founder and COO of Rayleigh Solar Tech, a hardware startup focused on commercializing the next general of solar technology.





INDUSTRY MIX



FACULTY REPRESENTATION



NovaResp

"Hardware work happens at the HUB. As a start-up company we couldn't afford the equipment that we can access there. The ability to use the 3D printers to build and test ideas that could potentially be patented is huge. For example, if we need to test the influence of different configurations on accuracy of an ultrasonic flowmeter, the team first brainstorms and sketches the design, then 3D prints and tests the concept. Our team is incredibly smart, and they come up with such cool ideas, so I know they have things under control"

– Hamed Hanafi, founder of NovaResp, a hardware and software start-up that helps sleep apnea sufferers breathe easier.



GROWTH THROUGH DIVERSITY: EXPANDING OUR COMMUNITY

Early-stage entrepreneurs must focus relentlessly on building the right product for the right customer. But many successful founders also acknowledge another priority that has an outside impact on their success (or failure): a strong culture. Often referred to as 'the way we do things around here,' culture is strongly influenced by diversity, inclusivity, and equity. For the Emera ideaHUB, how we uphold and act on these priorities influences our success, and that of our client companies.

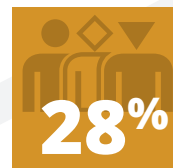
We are committed to building an equitable, diverse, and inclusive space for client companies to operate, and to helping our founders make decisions that uphold these priorities. When it comes to diversity, the engineering profession in Canada has a goal of 30% women by 2030. Over the last two years we have supported 255 participants, 30% of whom are women, and 28% of whom are visible minorities. We also see the impact that intergenerational teams and friendships have on the growth of our client companies, and we are proud to count people from six different decades among our community.

This is a good start, but like many organizations, we have work to do. Although we have almost met our 5 year goals for participants from under-represented groups our outreach numbers are an area we have identified for improvement this year. This year, we will develop our first equity, diversity, and inclusion strategy, with targets we will introduce in next year's report to track our commitment through meaningful action.

PARTICIPANTS **255**



women



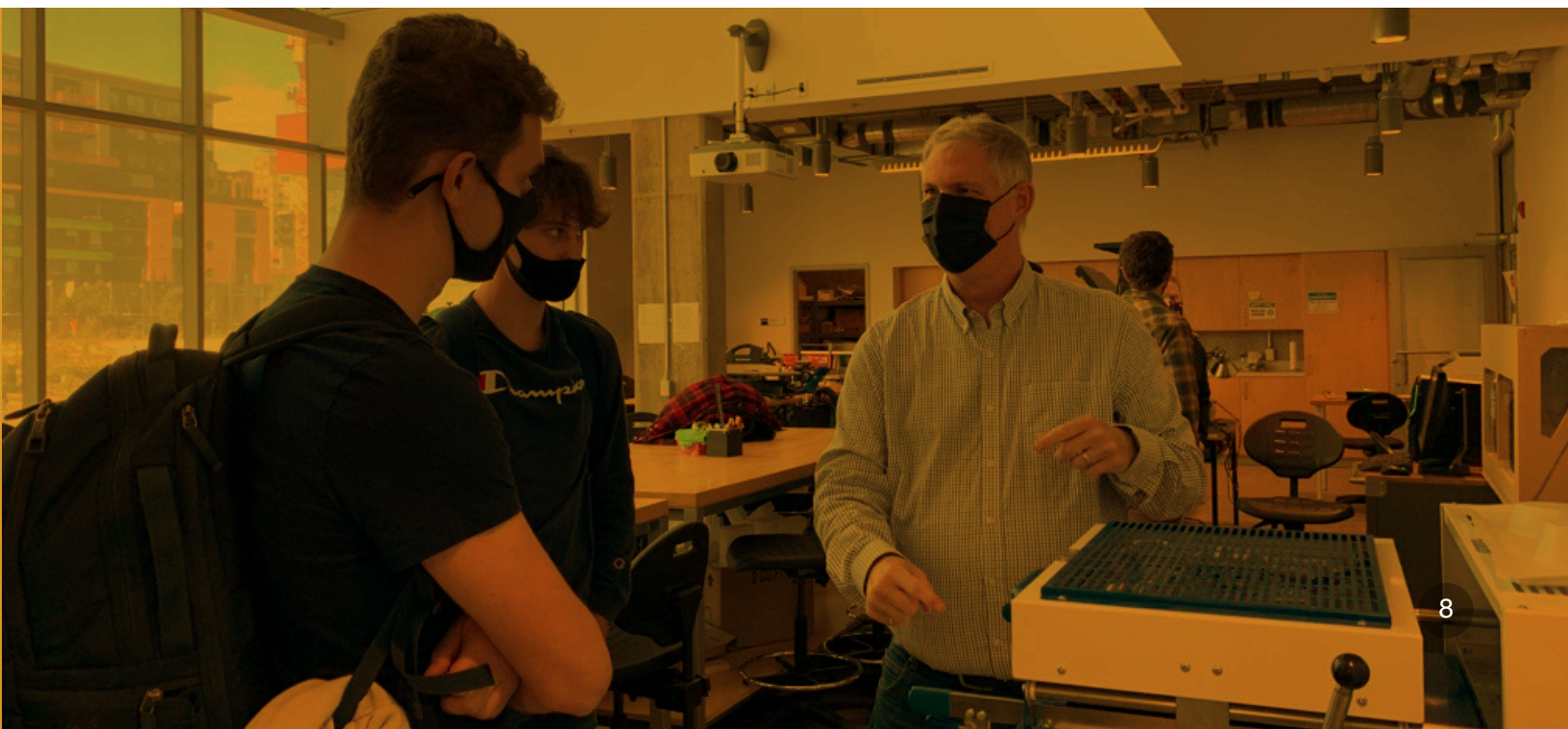
visible minorities



GROWTH OF OUR PIPELINE: EXPERIMENTATION FUELS INNOVATION

In our first two years, we have begun to develop a reputation for enabling early-stage product innovation in our ecosystem. What's crucial to our success is our pipeline of students and other future founders being able to explore innovation and entrepreneurship. Already hitting our 2025 target for Young Innovators, we have welcomed 75 participants into the program we created for idea-stage founders. We've also collaborated extensively with our peers in Dal Innovates and the six Dalhousie sandbox spaces to host and deliver hackathons, design challenges and workshops. In our first year we hosted 20 events and seminars, a number we more than doubled last year with 45 (virtual) events and programs – well on our way to 100 sessions by 2025.

As we return to our physical maker spaces this year, we aim to improve our presence within the engineering student body, driving up the number of Capstone projects sponsored and offering up co-op opportunities with Em-era ideaHUB companies. We be setting new targets for ourselves with our Young Innovators to focus not only on how many Young Innovators start companies, but also what we can do to help them succeed even further on their entrepreneurial journey.



ACCELERATING FOR IMPACT

A MESSAGE FROM OUR INTERIM DIRECTOR

The team at the Emera ideaHUB is proud of every company we've welcomed through our doors, and the results we have achieved together. The boutique experience we offer to companies at the Emera ideaHUB is unique in our region, combining technical expertise, top-of-the-line equipment and technology, programming and mentorship that represents \$27,000 in value to each participating company.

We know that the quality and calibre of the people and resources we supply to our client companies will have an impact on their success. To attract the top client companies, we will focus on strengthening our industry partnerships to offer the best experts and mentors; curating the best programming for technical, business and leadership skills; supplying the best technology and equipment; and offering the best opportunities for innovation and collaboration that only a tough tech-focused product incubator can make possible.

Thank you for your continued support and the leadership role you play in our economy. We look forward to sharing our progress toward 2025, as we challenge ourselves to do more, so that our founders can accelerate their innovation, and achieve more.



Erin O'Keefe Graham
Interim Director, Emera ideaHUB

A stylized, handwritten signature in black ink, consisting of a large 'E' and 'G' followed by a long horizontal line.

Our 2025 Performance Goals

KPI PERFORMANCE 2 YEAR ACTUALS AGAINST 5 YEAR GOALS

Indicators	2019-2020 Metrics (Actuals)	2020-2021 Metrics (Actuals)	2025 Goals (5-year Cumulative)
Increase Innovation & Entrepreneurship (I&E) education, including courses, co-ops and experiential learning.			
Number of Capstone projects sponsored	5	1	25
Number of co-ops with HUB companies	6	9	50
Expand Research related to I&E that generates IP, commercialized research, and industry partnerships.			
Value of R&D partnerships with Dalhousie.	\$750k	\$4M	\$6M
Patents	15	22	75
Trademarks	3	12	15
Copyrights	3	7	15
Trade Secrets	10	106	50
Enhance Inclusion & Diversity in I&E Programs.			
Outreach to under-represented groups and participants	4	7	50
HUB participants from under-represented groups	10	87	100
Support more student led I&E skills development			
Number of hackathons and design challenges	5	5	25
Number of workshops/seminars for students	25	25	75
Grow student, faculty, and recent graduate participation in programs to explore and experience ideation, I&E, including starting a new business or social enterprise.			
Number of Young Innovators	10	65	75
Young Innovators starting their own companies	3	25	25
Contribute to the economic impact of the region.			
Total number of ventures participating in HUB programming (BRIDGE, BUILD, Young Innovators)	19	36	100
Financing secured by current and recent alumni ventures (Investment, Loans, & Non-Dilutive)	\$5M	\$23M	\$75M
New ventures' survival rates after one year (the number of ventures that are still active or have been acquired after one year)	14	24*	75
Number of job positions created in current and recent alumni ventures	20	86	250
Revenue and paid pilots generated by current and recent alumni ventures	\$750k	\$4M	\$25M
Number of residents and recent alumni ventures accepted into later stage incubators and accelerators	8	38	50
*NB: This number is only representative of companies that have been in existence for more than one year.			

2020-2021 Emera ideaHUB Companies



AIR CLARITY SOLUTIONS



Axion Independence
Mobility Inc.



MacDonald Hallett
Oceans Protection
Engineering Group Inc.





THANK YOU DONORS

Your transformative gift ensures opportunities for economic development in our region and new skills development for our future engineers. **Thank you.**

*Pictured left to right: John Newhook P.Eng Dean of Engineering ,
Dr.Deep Saini President and Vice-Chancellor of Dalhousie,
Scott Balfour, President & CEO Emera, Rick Janega Chief Operating
Officer, Electric Utilities, Canada & Caribbean at Emera Inc.*