DALHOUSIE UNIVERSITY
STRATEGIC DIRECTION
2014–2018

Year 2 Progress Report, June 2016
PRESIDENT’S MESSAGE 2
OUR APPROACH TO PLANNING 4
HOW ARE WE MEASURING OUR PROGRESS? 5
KEY PERFORMANCE INDICATORS 6
1.0 TEACHING AND LEARNING 10
2.0 RESEARCH 13
3.0 SERVICE 16
4.0 PARTNERSHIPS AND REPUTATION 19
5.0 INFRASTRUCTURE AND SUPPORT 22
DALHOUSIE BY THE NUMBERS 25
TWO YEARS HAVE PASSED since Dalhousie’s Senate and Board of Governors approved Inspiration and Impact, our strategic direction for 2014-2018. In addition to renewing our mission and vision, that direction outlined 25 priorities in five areas: teaching and learning; research; service to our communities; building partnerships; and attracting the resources to fuel our ambitions. This is our second annual report on progress towards those objectives.

Halfway through our four-year plan, we have made significant progress on many of our priorities, while grappling with others. We continue to attract more students than any other Atlantic Canadian university. Our faculty were recognized with multiple national awards, and continue to publish at impressive rates. Our donors provided over $32M in financial support, more than in any of the last four years. Last fall, our entire community rejoiced when Dal alumni Art McDonald (BSc’64, MSc’65) was awarded the Nobel Prize in Physics. At the same time, student retention is down and, like many of our peers, enrolment and research funding are flat. It is an overall picture of strong progress with some significant challenges—perhaps what we should expect halfway through our plan.

How can we make even more progress? Insight comes from considering two of our toughest challenges: fostering diversity and inclusiveness, and catalyzing innovation and entrepreneurship. I am proud of the steps we have taken to improve Dalhousie’s diversity and inclusiveness, including a number of significant community consultations, important hires into new key roles and the commitment of our Senate, Board and broader Dal community. We have much work ahead of us, but we have made real progress in creating an environment that is open to tough questions, committed to transparency and united in a desire for positive change.
On the innovation and entrepreneurship front, Dalhousie has stepped up as a key partner in fostering an ecosystem of innovation in Nova Scotia, one that equips our communities, our students and our graduates to build economic strength within our province and beyond. We are creating spaces and programming—such as the Wallace McCain Learning Commons, the Collider in the Killam Library and the planned IDEA Building and ideaHub—where students, faculty, business partners and the community can gather to co-create the ideas that will fuel Nova Scotia’s future.

The lesson from these two examples is the same: when we work together with genuine engagement and partnership across our internal and external communities, we can make great progress.

The pages that follow provide a summary of our achievements in the last year across all of our key priority areas. We hope that you will share in the excitement of our progress and become further engaged—which you can do anytime by going to DAL.CA/FORWARD. I sincerely look forward to working with you in the year ahead as we strive to achieve our collective vision.

Richard Florizone, President
In 2013, we embarked on 100 Days of Listening, a period of rigorous analysis and thorough consultation, which in turn resulted in a comprehensive statement of priorities, Inspiration and Impact: Dalhousie’s Strategic Direction 2014-2018. Our Strategic Framework (right) identified five strategic areas: three core areas of Teaching and Learning, Research, and Service, supported by Partnerships and Reputation, and Infrastructure and Support. Since then, the Dalhousie community has worked together to bring our priorities to life. Implemented under the Provost in a process geared to ensure that our academic goals drive our work and that our strategic priorities are aligned within the university’s budget, our shared efforts are targeted at maximizing collaboration and coordination across the university.

**Timeline**

*100 Days of Listening* July-December 2013. More than 500 meetings and consultations; over 700 online submissions. The result: a final report drawing implications for Dalhousie’s future direction.

*Board of Governors Approves Strategic Direction* June 2014

*Strategic Priority Project Leads Assigned and Specific Goals and Timelines for Each Strategic Priority Defined* November-December 2014

*Senate Approves Strategic Direction* May 2014. Based on 100 Days of Listening, 2014-2018 Strategic Direction developed and approved.

*Provost Committee Approves Project Charters* January 2015

*University Strategic Direction Progress Report, 2015 Released* June 2015

*Senior Administration Retreat on Mid-Term Strategic Direction Progress* Summer 2016


*University Strategic Direction Progress Report, 2016 Released* June 2016
HOW ARE WE MEASURING OUR PROGRESS?

IN INSPIRATION AND IMPACT, we set out our strategic direction for 2014–2018, establishing clear priorities required to bring Dal’s Vision and Mission to life. As we move forward, it is essential that we measure our progress, celebrate our achievements and, where necessary, adjust our course. This Progress Report provides a snapshot of our second year, highlighting some of Dalhousie’s significant achievements as we strive to fulfill our strategic priorities by 2018.

OUR PROGRESS · On the pages that follow, you will see a coloured progress indicator attached to each priority, along with text highlights of this year’s achievements. The progress indicator shows the status of that priority in this second year of our strategic direction and is a qualitative assessment of how well we fared on each priority.

YEAR OVER YEAR PROGRESS ON INDIVIDUAL PRIORITIES · As you compare this year’s progress on individual key priorities to the progress highlighted in last year’s report, you may see that some priorities that had achieved a green or amber indicator last year have received an amber or red indicator this year. This reflects a qualitative assessment that our accomplishments on this particular key priority have not progressed as we had hoped and acknowledges the overall progress towards our four-year goal for that priority. All priorities remain important and we are committed to a fair and accurate assessment of their current standing, based on how they have performed this year and where they stand in relation to their 2018 target.

OVERALL YEAR OVER YEAR PROGRESS · Captured below is a snapshot of the number of green, amber and red indicators in Year 1 of Dalhousie’s Strategic Direction, as compared to Year 2.

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>YEAR 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15</td>
<td>17</td>
</tr>
</tbody>
</table>

WHAT DOES THE INDICATOR MEAN?

RED
In development

YELLOW
Gaining momentum

GREEN
Good progress

WHAT DOES THE INDICATOR MEAN?
KEY PERFORMANCE INDICATORS

WE ARE PRESENTING selected graphs that represent key performance indicators. These are priority areas of focus and reflect the progress we are making and the work we need to continue to do.

STRATEGIC AREA 1—TEACHING AND LEARNING

1.0 TEACHING AND LEARNING — ENROLMENT
Canadian and international (Dec. 1, 2011–2015)

The overall enrolment trend is stable.

*The larger increase in 2013 is (in part) a result of NSAC becoming Dalhousie’s Faculty of Agriculture.

1.0 TEACHING AND LEARNING — RETENTION
First to second year retention by Faculty

Increasing retention across all faculties continues to be a top priority.

*The Faculty of Agriculture joined Dalhousie in September 2012.
1.0 TEACHING AND LEARNING — PROGRAM DEVELOPMENT
New and modified programs by academic year (2012–2016)

Development and modification of programs is an indicator of Dalhousie’s commitment to continuous improvement in teaching and learning.

2.0 RESEARCH—INCOME
Research awards by major source (2010-2015)

Analysis shows growth in Tri-Agency, industry and government funding; major fluctuations in clinical trials with pharmaceutical and biotechnology; and opportunities for not-for-profit funding.

2.0 RESEARCH—INSTITUTIONAL FRAMEWORK FOR THE SUPPORT OF RESEARCH (IFSR)
Success Rate in select Tri-Agency Competitions (2012–2015)

Strengthening our performance in Tri-Agency competitions remains a priority.
2.0 RESEARCH—IMPACT

Publications per million dollars of research funding

Dalhousie outpaces the U15 average in publications per million dollars of research funding.

Strategic Area 3—Service

Creativity, Innovation and Entrepreneurship (CIE)

TEN
Entrepreneurship Courses
WITH
435
Students

NEW CERTIFICATES IN:
Entrepreneurship Skills
Computing in Arts
and Social Sciences

2
DEGREE MAJORS

7.3%
ANNUAL GROWTH IN
CO-OP WORK TERMS

1,916
STUDENT PLACEMENTS

Leadership & Collaboration

Curricular & Co-Curricular

SANDBOXES

IDEA Sandbox
1,300+
Participants

Cultiv8
2,000+
Participants

SHIFTKEY Labs
1,500+
Participants
6 Teams in Active Support

Innovative Spaces

Commercialization of Research

LAUNCHDAL

435 ONGOING RESEARCH AGREEMENTS

7,860+
INTERACTIONS WITH
STUDENTS, RESEARCHERS, AND COMMUNITY

350+
VENTURE AND ENTREPRENEURIAL PROJECTS

$250K+
PROVIDED ANNUALLY

51 EVENTS

Dalhousie outpaces the U15 average in publications per million dollars of research funding.

Publications per million dollars of research funding
4.0 REPUTATION—RANKINGS

Dalhousie’s rank in select international rankings (2013–2015)

Dalhousie follows three major global rankings: Academic Ranking of World Universities (ARWU/Shanghai), Quacquarelli Symonds (QS) and Times Higher Education (THE).

The lines are intended to show the ranges in which Dalhousie is ranked (for example, 201–300 for ARWU 2013), while the markers indicate Dalhousie’s rank more precisely.

5.0 INFRASTRUCTURE—CENSUS

Proportion of Dalhousie employees self-identifying as...

The Winter 2016 census provided Dalhousie with a snapshot of current diversity and a baseline from which to develop strategies and measure progress.
1—TEACHING AND LEARNING

GOAL: ENHANCE THE TRANSFORMATIVE POWER OF TEACHING AND LEARNING  Our efforts are focused on attracting, supporting and retaining the best local and international students, as well as attracting, supporting and retaining outstanding academics who are research and teaching innovators and leaders. In the last year, we have faced retention challenges, but have developed data-driven strategies to address this issue. As well, we continue to assess and strengthen program offerings and to take steps to foster excellence in teaching and pedagogy.

SUCCESS STORY: A TRANSFORMATIVE HEALTH EDUCATION FACILITY  Health-care professionals don’t work in silos, they work in teams, and at the centre of every effective team is a patient, client or family. A new approach to training those professionals—interprofessional education or IPE, which focusses on students in different professions learning with, from and about one another to develop the attitudes, skills and behaviours required to enhance collaboration and quality of care—means that Dalhousie students and graduates are better prepared than ever for the reality of the modern health-care workplace. Dalhousie’s commitment to IPE is clearly demonstrated by the university’s new $38.5-million Collaborative Health Education Building (CHEB), funded in part by the Province of Nova Scotia, the McCain Foundation and the Windsor Foundation. CHEB will enable the university’s 3,700 Medicine, Dentistry and Health Professions students to come together throughout their respective curricula for integrated learning experiences designed to foster interprofessional collaboration. At its opening in December, 2015, the five-storey, 117,000-square foot facility was heralded by Premier Stephen McNeil as a step forward for health education and care in the province. The building is packed with potential: The classrooms on the first floor are designed to enable classes to mix small group discussions with large plenary sessions; in addition to its classrooms and seminar room spaces, the second floor features a learning commons associated with the library that includes many small alcoves where students from Dal’s different schools and departments can come together to work in teams on projects and assignments in a way they might on the job; the building’s third floor boasts several state-of-the-art clinical skills and simulation labs designed to mimic realistic homecare, rehabilitation and hospital settings where students can move their classroom learning about interprofessional collaboration into simulated practice before working with real patients or clients. Wired throughout with the latest IT and remote-broadcasting technology, CHEB expands Dal’s capacity for interactive learning and research in the health fields. And it ensures that Dalhousie graduates will be fully equipped to meet the demands of providing top-notch health care in a multidisciplinary environment.
1.1 Increase retention and degree completion
- First to second year retention has decreased from 84% to 82.8%, and retention for international students has decreased from 85.8% to 82.4%
- Student Success Data Analysis Team (SSDAT) identified student population segments most at risk for leaving, defined the main drivers of academic success and retention of Dal students and developed a predictive model to assess risk for incoming students, identifying segments for intentional retention and academic success programming
- Targeted strategies, including holistic advising, early alert system, review of academic regulations, improved support for transition to university, targeted financial support and increased engagement for at-risk populations, developed for Fall 2016 implementation in key Faculties with greatest opportunity to improve retention and degree completion
- Case for fundraising support of retention and academic success initiatives developed with Advancement

1.2 Focus on strategic student recruitment based on discipline, level and diversity
- Enrolment consistent with 2014/2015
- Enrolment of international students has increased to 17% in 2015/2016, up from 16% in 2014/2015
- Draft strategic enrolment planning and management framework developed for campus consultation, proposing a data-informed cross-campus collaborative approach to recruitment as part of a larger integrated and cross-campus enrolment process
- Scholarships and bursaries for undergraduate students (including the NS Bursary Program) $24M in 2015/2016, compared to $25.3M in 2014/2015

1.3 Strengthen student experience, leadership development and additional support for our locally diverse and international students
- Positions of Vice-Provost, Student Affairs and Aboriginal Student Advisor filled
- Ombudsperson position created
- Strategic planning exercise launched within Student Affairs
- Impact Awards in 39 categories recognized nearly 80 students and groups for their student leadership and civic engagement

1.4 Embark on strategic program reviews to enhance the effectiveness and student focus of our program offerings
- 9 programs received full accreditation in 2015/2016
- Non-accreditation program reviews in 2015/2016: 8 Undergraduate, 35 Master, 18 PhD
- Senate review of Faculty of Science completed
- Reviews of Faculty Academic Plans underway
1.5 Foster and support innovation in program development and excellence in teaching and pedagogy

Program Development
- Two Academic Innovation projects launched (practicum placements for Political Science and Gender and Women’s Studies students and data literacy)
- New programs implemented: Indigenous Studies Minor, PhD in Health
- New programs approved: MSc Nursing, MSc in Psychiatry Research, MSc and PhD in Medical Physics, BSc Actuarial Science, Graduate Diploma in Public Administration (Management), BSc Bioveterinary Science, Bachelor of Technology in Small Business Management, Minor in Black and African Diaspora Studies
- Significant program modifications underway in BSc Nursing, Master of Nursing, Master of Arts in French, Bachelor of Applied Computer Science
- Certificate programs: Computing in Arts and Social Sciences; Emergency Health Services Management; Emergency Health Services System Planning; Graduate Certificate in Mental Health, Substance Use and Addictions; Animal Welfare; Genetics and Molecular Biology; International Rural Development; Integrated Pest Management; Environmental Biology (Post-baccalaureate); Food Bioscience (Post-baccalaureate); Master of Health Administration – Certificate in Advanced MHA Studies: Strategic Decisions in Health Administration

Teaching and Pedagogy
- Successful migration to new learning management system; implementing a lecture capstone expansion
- Institutional suite of teaching awards enhanced, led by Centre for Learning and Teaching (CLT)
- Dalhousie 20th annual conference on university teaching and learning
- Hosted 2015 COHERE conference, the 6th Biennial Threshold Concepts Conference and the 2016 conference of the Canadian Engineering Education Association
- Marie Battiste, Allan Downey and Margaret Kovach brought to campus to support conversations about transforming Indigenous education, curriculum and pedagogy
- CLT piloted and evaluated new Teaching Assistant Enrichment Program (TAEP) to enhance TA support
- Dr. Matthew Schnurr recipient of one of five national Society for Teaching and Learning Higher Education Brightspace Innovation Awards
- E-Learning Advisory committee created by Senate Teaching and Learning Committee
- CLT recognized outstanding achievement in teaching and pedagogy with awards to Dr. Anne Marie Ryan, Dr. Brenda Sabo, Dr. Cheryl Murphy, Dr. Christine Chambers, Dr. Laura Eramian and the Management Without Borders teaching team
GOAL: EXPAND THE OPPORTUNITIES FOR RESEARCH, SCHOLARLY AND ARTISTIC WORK

Our efforts are focused on priority research areas supported by the necessary infrastructure to undertake that research. This year, we have made good strides but there is more to be done.

SUCCESS STORY: IT'S ABOUT MORE THAN WINNING PRIZES

When external organizations recognize Dalhousie faculty for their excellence in teaching and research, it’s about more than simply winning a prize. These awards demonstrate the reputation and stature of the faculty assembled at Dal, the effort they expend and, for some, the interdisciplinary collaborations they foster within and beyond Dalhousie. In the last year, Dalhousie faculty members have been recipients of several significant research awards. Chemistry’s Dr. Axel Becke, who last year was the recipient of the Gerhard Herzberg Canada Gold Medal (the highest honour from the Natural Sciences and Engineering Research Council of Canada), this year won the Canada Council for the Arts Killam Prize in the Natural Sciences, making him the third Dalhousie researcher to receive a Killam Prize since the awards were inaugurated in 1981, following Biology’s Dr. Brian Hall (2005) and Philosophy’s Dr. Susan Sherwin (2006). Professor Jocelyn Downie, cross-appointed in the Faculty of Law and the Faculty of Medicine, became Dalhousie’s first Trudeau Fellow. Dalhousie faculty members Dr. Chike Jeffers (Department of Philosophy cross-appointed with Canadian Studies and International Development Studies), Dr. Krista Kesselring (Department of History) and Dr. Christine Chambers (Faculty of Medicine and Science), were welcomed into the Royal Society of Canada’s (RSC) College of New Scholars, Artists and Scientists, joining Dal scholars Dr. Roberta Barker (Fountain School of Performing Arts) and Dr. Randall Martin (Physics and Atmospheric Science/Chemistry), who were part of the college’s inaugural 2014 cohort. The RSC also inducted two Dal faculty members into its National Academy: Professor Richard Devlin of the Schulich School of Law and Dr. Jeffrey Hutchings of the Department of Biology. Their induction as fellows brings the number of Dalhousie-affiliated researchers elected as RSC Fellows to 43, according to the RSC’s database. All are richly deserving of their accolades, which demonstrate the vibrancy of Dalhousie’s teaching and research environment and are evidence of Dalhousie’s reputation as an institution that fosters teaching and research excellence.
2.1 Direct and attract resources to priority research areas, with local, national and international importance

- In 2015/2016, Dalhousie had approximately $136M in research grants/awards compared to $135M in 2014/2015
- Number of applications for Tri-Agency funding competitions for 2014/2015 to 2015/2016: applications increased slightly from 86 to 87 for NSERC; increased from 65 to 74 for CIHR; and decreased from 31 to 17 for SSHRC

Major Research Project Awards

- Christopher McMaster (PI)—CFI Innovation Fund: Research Program for Rare Pediatric Diseases $6.5M Dal portion of $21M collaboration
- Scott Halperin (PI)—Phase 2 Clinical Trial of an Experimental Ebola Vaccine Among HIV-Positive Populations in Africa and Canada, International Development Research Centre, $3.6M
- Roy Duncan (PI)—CIHR Foundation Scheme Viral Membrane Fusion Machines, $2.5 M
- Michael Ungar (PI)—Network of Centres of Excellence for Children and Youth in Challenging Contexts: Mobilizing Network Knowledge to Prevent Problems and Promote Resilience (CYCC Network), refunded $2.3M

Major Research Funding Proposals

- Canada First Research Excellence Fund—Safe and Sustainable Development of the Ocean Frontier, $225M
- Challenge 2 of the CFI Cyberinfrastructure Initiative—ACENet Data Centre Hosted at Dalhousie, $12M
- Stan Matwin (PI) CFI Cyber Infrastructure—MERIDIAN: Marine Environmental Research Infrastructure for Data Integration and Application Network, $4.7M
- Syrian Refugee Children and Youth Consortium SSHRC Partnership grant, $2.5M

Tracking of Research Performance

- Data sources and bibliometrics added to multi-year research performance tracking and analysis
- Analysis of trend of research awards by major source reveals:
  - Modest growth in total Tri-Agency funding and business/industry funding
  - Strong growth in government funding (primarily federal)
  - Volatility of pharmaceutical and biotechnology funding
  - Opportunity to improve funding from not-for-profit organizations
- Analysis of research publications (Scival) and research funding from previous year (CAUBO) shows that:
  - Dalhousie accounts for approximately 2.5% of U15 research funds but produces 3.7% of U15 publications
  - Dalhousie’s number of publications per $M research funding is above the U15 average and generally increasing at a greater rate than the U15 average over the past 3 years
- Success rates for Dalhousie researchers in peer-reviewed Tri-Agency funding competitions have remained relatively consistent: 61% for NSERC (compared to to 63% in 2014/2015); 15% for CIHR (compared to 17% in 2014/2015); and 35% for SSHRC (compared to 32% in 2014/2015)
2.2 Attract and retain outstanding academics

Canada Research Chairs (CRC) Program
- 4 new Tier 2 CRCs and 3 new Tier 1 CRCs began their first award period (the Tier 2 CRCs were new hires to Dalhousie)

NSERC Industrial Research Chairs
- Dr. Mark Obrovac’s NSERC /3M Canada/Dalhousie Industrial Research Chair in Metal-Ion Batteries for EV Power Sources was renewed for a new five-year term (Nov 2015 to Oct 2020)

2.3 Attract and support excellent graduate students and postdoctoral fellows to strengthen the impact of research

- Faculty of Graduate Studies paid out $26M in scholarships and bursaries (including NS Bursary Program) to students in 2015/2016, consistent with 2014/2015
- Dalhousie has 149 post-doctoral fellows as of 2015/2016, compared to 163 in 2014/2015

2.4 Foster undergraduate research

- All undergraduate students have the opportunity to engage in experiential learning (EL), which includes undergraduate inquiry-based learning and research; 87% of students participate in EL
- Increasing profile of Faculty-led undergraduate research conferences and student research events
- Dalhousie is actively involved in a province-wide PSE group analyzing for the first time rates of engagement across the continuum of EL
- The Experiential Learning Working Committee (a subcommittee of the Innovation Table, which includes all Nova Scotia university and college presidents) is charged with looking for opportunities to expand EL, especially work-integrated learning opportunities for undergraduate students, including undergraduate research

2.5 Enhance research with state-of-the-art facilities and resources driven by the Institutional Framework for the Support of Research

Major Awards and Prizes
- Officer designated to coordinate and facilitate nominations to high-profile awards competitions recognizing our research excellence
- Dalhousie faculty members Professor Richard Devlin and Dr. Jeffrey Hutchings inducted as Royal Society of Canada Fellows and Dr. Christine Chambers, Dr. Chike Jeffers and Dr. Krista Kesselring inducted as members of the Royal Society’s College of New Scholars, Artists and Scientists
- Professor Jocelyn Downie awarded Trudeau Fellowship
- Dr. Axel Becke 2016 recipient of the Canada Council for the Arts Killam Prize in the Natural Sciences
- Dr. Jeff Dahn honoured with inaugural Governor General’s Innovation Award

Research Facilities
- Process in place to recognize and support core research facilities on campus, including the Facilities for Material Characterization (FMC), NMR-3, the Aquatron, the Atlantic Data Research Centre (ADRC) and the Faculty of Medicine CORES that encompasses six major research facilities
GOAL: CATALYZE THE INTELLECTUAL, SOCIAL AND ECONOMIC DEVELOPMENT OF OUR COMMUNITIES

Our efforts are focused on service contributions both within the academic community and more broadly to society. Our impact on the economic development of communities is enabled by many university activities that foster creativity, innovation and entrepreneurship. This year we have made significant advances in our efforts around innovation and entrepreneurship, as well as continuing to contribute to the community through a wide range of clinics, programs and volunteer activities.

SUCCESS STORY: FOSTERING COLLABORATION, INNOVATION AND R&D

How can Dalhousie enhance the innovation ecosystem of our region? That question is at the heart of a new project being launched by the university that will dramatically boost Nova Scotia’s research and development capacity and provide greater opportunities for students, researchers, entrepreneurs and industry to collaborate, innovate and commercialize technologies. Dalhousie’s IDEA Project will transform Dalhousie’s Sexton campus into the heart of Halifax’s innovation district, linking university-based R&D to neighbouring activity such as the IT startup incubator Volta Labs (which will be located in the nearby old Halifax Library) and the new Centre for Ocean Ventures and Entrepreneurship (COVE), both of which Dalhousie is supporting. It will also link to nearby research hospitals, Halifax’s downtown business district, ocean tech cluster and other universities and colleges in Atlantic Canada. The project’s new IDEA Building, a 72,750 square-foot space, will include the ideaHUB, which in partnership with the private sector will support incubation, mentoring and accelerator programming tailored to physical products, and be connected to other incubators and accelerators in Atlantic Canada. This innovation space will allow students, faculty, designers, makers and entrepreneurs to learn, apply knowledge, develop new ideas, conduct cutting-edge research, commercialize discoveries and build innovative products and applied technologies. The ideaHUB will become home to the existing IDEA Sandbox and will have the ability to house 15 startups, as well as having room for established companies to create innovation spaces for product development or enhancement. The workshops will include top-quality equipment such as injection moulding, 3D printers, water jet cutter, circuit board printers, UV printer, thermoforming, environmental chamber, laser cutters, CNC milling machines and more. There will be ongoing activities and events including bootcamps, short engagement events, activities, speakers, seminars, make-a-thons and workshops. Slated for completion in 2018, the IDEA Building and ideaHUB will be critical catalysts in enabling Nova Scotia’s innovators and entrepreneurs to create new products, capture new markets and enrich our region.
3.1 Contribute to cultural and economic vitality, locally and globally, by fostering creativity, innovation and entrepreneurship

Curricular and Co-curricular
- Courses: 10 creativity, innovation and entrepreneurship courses offered, including The Creative Process, New Venture Creation and Advanced Entrepreneurship; 435 students
- Certificates: Entrepreneurship Skills Certificate open to all Dal students; Certificate in Creativity, Innovation and Entrepreneurship in development; Certificate in Computing in Arts and Social Sciences to be launched Fall 2016
- Programs: Faculty of Management offers BComm, Major in Entrepreneurship and BMgmt, Major in Entrepreneurship & Innovation; New Master of Applied Computer Science to be launched Fall 2016
- Co-ops: 7.3% annual grown in co-op work terms since last year (with 12.5% increase in Science, Information Technology and Engineering placements), to 1,916 placements total

Sandboxes
- IDEA Sandbox: 1,200 students participated in seminars, 120 students in workshops and 19 students in the summer program; faculty and industry seminars increased to 6 each, up from 2 and 4 respectively; faculty workshops increased from 4 to 8; $60k in direct student funding for projects
- ShiftKey Labs: Over 1,550 students participated in ShiftKey events in 2015/2016; first incorporated venture, Sandcastle App Development, launched in November 2015; 12 project teams on-boarded in 2015/2016 with 6 in active support; Technology Innovation course launched with 26 students in Winter 2016
- Cultiv8: More than 2,800 students, faculty and industry participants in 2015/2016, up from 309; over 30 pitches and approximately $30k in prizes given to students; representation at National Global Student Entrepreneur Awards (Toronto) and International Business Model competition (Seattle)

LaunchDal
- Dalhousie’s flagship entrepreneurship program, offered by Norman Newman Centre for Entrepreneurship, opened its new space in the Killam Library and had 51 events and over 7,868 interactions with students, researchers and members of the community, up 17.2% from 2014/2015
- Supported 200 early stage mini ventures; 75 venture projects; 20 entrepreneurial work terms; 80 early stage ventures; 30 Canada’s Business Model Competition teams; and 10 LaunchPad accelerator teams
- $250k provided annually to support venture teams plus additional annual investment of up to $1M attracted from three prominent local entrepreneurs; $1.1M raised from private sector donors
- Spring Loaded Technology won national BDC Young Entrepreneur award ($100k) and received $1.9M investment from Build Ventures; Site 2020 Inc. won $100k in cash and in-kind services in I-3 competition; Dal team from Canada’s Business Model Competition accepted into Y Combinator, most prestigious startup accelerator in the world; a Launch Dal entrepreneurial work term team accepted to present on Dragons’ Den; and Starting Lean participant founded The Atlantic Institute for Resilience

Commercialization of Research
- In 2015/2016, Industry Liaison and Innovation Office supported 435 research and service agreements (up from 412 in 2014/2015), 43 patent filings (up from 32); 7 technology licenses (up from 4) and 21 startups supported (up from 12)

Leadership and Collaboration
- Dal is supporting and playing a leadership role in the innovation ecosystem, including partnerships with incubators, accelerators, science parks, venture capitalists and other organizations
- Dal has representation on all of the working groups of Nova Scotia Department of Labour and Advanced Education Innovation Team, with President Florizone co-chairing the working group on R&D and Commercialization
- Dalhousie will be the champion for the Massachusetts Institute of Technology Regional Entrepreneurship Accelerator Program (MIT REAP), a capstone global initiative for jurisdictions to develop and implement ecosystems focused on innovation-driven entrepreneurship

Innovation Spaces
- IDEA Project commenced, which includes IDEA Building and renovations and retrofits to existing engineering facilities and labs; project will result in the creation of the ideaHUB, the Advanced Manufacturing Hub, the Clean Tech Hub and the Ocean Tech Hub
3.2/3.3 Promote a culture of service and engagement by maximizing the opportunities for students, faculty and staff to contribute to community both inside and outside of the university

Community Clinics
- School of Social Work clinic has received 219 referrals from almost 60 referral sources since it opened in June 2014
- In 2015, Dalhousie Legal Aid Service opened 319 new client files and 7 new community files and took 622 calls through the telelinks program; receptionists referred 120 callers to private lawyers, 40 to the Legal Information Society of Nova Scotia, 140 to Nova Scotia Legal Aid and 87 to Dal’s tenant rights project; tenant rights volunteers made contact with an additional 334 people
- In 2015, 237 Dentistry and Dental Hygiene students worked in the Dentistry Faculty’s clinics, completing a total of 22,625 appointments

Community Outreach
- Faculty members at the Schulich School of Law have provided advice and support to all levels of government including work on restorative justice
- The Dalhousie Agricultural Campus McRae Library’s Seed Library has 11 registered users and lent 203 seed packets with approximately 3,045 seeds introduced into the community
- Under the Agricultural Campus Friends of the Garden program, 35 volunteers assist staff in maintaining the Botanical Gardens
- The Agricultural Campus annual plant sale attracts 300-400 people

Youth Programs
- Dalhousie’s Supernova program offers classroom workshops, clubs, events and summer camp programs for youth interested in science, engineering, technology and mathematics (STEM); in 2016 to date, offered 46 camps (up from 41 in 2015) including 11 engineering camps (up from 9), with registrations at 630 (up from 629)
- Dalhousie is one of 12 campuses nationally to host a SHAD summer program, with Dal faculty and student volunteers offering hands-on workshops and lectures to high school students; a project idea launched at SHAD Dalhousie went on to win the national SHAD-John Dobson Entrepreneurship cup, the third win in the past 5 years for projects started at SHAD Dal
- Let’s Talk Science reached over 4,800 youth throughout Nova Scotia, double those reached in 2014/2015; program received Dal Impact Award for most impactful community-based society
- Dal’s Imhotep’s Legacy Academy programs, which are uniquely designed to foster interest in science, technology, engineering and mathematics (STEM) among students in Grades 6-12 of African heritage in Nova Scotia, had 245 participants in 2015/2016, compared to 209 in the 2014/2015 school year
- The annual summer Aboriginal Health Sciences Junior University Program, established in 2012, hosts Indigenous youth ages 14-17 in hands-on learning geared to health-related occupations, and averages 20 students each summer

Volunteerism
- 3 Canadian Interuniversity Sport (CIS) Community Service Award winners for combining athletics, academics and community service
- 250 student athletes spent more than 2,000 hours volunteering with a range of community groups in 2015/2016 compared to 900 hours in 2012/2013
GOAL: TAKE OUR PLACE NATIONALLY AND INTERNATIONALLY  Our efforts are focused on fostering strong partnerships, strengthening recognition for our academic excellence and celebrating our distinctive attributes. This year, we faced some slippage in some of our international rankings, though our reputation remains strong, donor commitment to Dal’s vision was evident in our fundraising success and momentum began to build for our 200th Anniversary.

SUCCESS STORY: PRIZE-WINNING RESEARCH ROOTED IN DALHOUSIE  His story involves one of the biggest puzzles in modern physics, an active nickel mine two kilometres underground in Sudbury, Ont.—and Timbits. In October, 2015, Dal alumnus Arthur McDonald (BSc’64, MSc’65) was announced as co-recipient of the 2015 Nobel Prize in Physics for his research on neutrinos, tiny subatomic particles generated in nuclear reactions within the sun that make their way to Earth, and one of the universe’s fundamental particles. Dr. McDonald’s research took place in a lab housed two kilometres underground at the Creighton Mine in Sudbury, where he and his team proved that the standard understanding of neutrinos—that they don’t change their type or “flavour” in their journey from the sun to Earth because they don’t have any mass—is incorrect. That’s where the Timbits come in: Dr. McDonald used the donut treats as a visual aid in describing his experiments on CBC Television’s This Hour Has 22 Minutes. His research has roots at Dal, where Dr. McDonald says he learned “how to do experimental science for the first time.” And as he told a capacity crowd at Dalhousie in March, “I’ve had a lot of fun in my career doing science, and it started with the attitude people have here at Dal: work hard, and enjoy what you’re doing.” That spirit of excellence underlies the work of another celebrated Dalhousie-connected researcher, Jeff Dahn, Canada Research Chair in Battery and Fuel Cell Materials and professor in the Department of Physics and Atmospheric Sciences and Department of Chemistry. Dr. Dahn and his team represent one of the world’s most renowned hubs of expertise in battery technology, an achievement recognized with one of the first ever Governor General’s Innovation Awards. The new award recognizes those whose innovations have had a transformative and positive effect on the quality of life in Canada. In collaboration with colleague Dr. Zhongua Lu, Dr. Dahn created a better li-ion battery that was a significant step forward for the technology, in part by making the cells more cost-effective to produce. Their innovative material combinations are now used in batteries that power everything from electric cars and power tools to smart-grid power-storage devices that could one day support the widespread use of renewable energy. The Governor General’s award joins the more than 20 major awards Dr. Dahn has won for both his teaching and graduate supervision as well as his research, with both Dr. McDonald and Dr. Dahn’s achievements demonstrating how the power of research can transform our world and how the passion for research enriches Dalhousie’s classrooms and labs.

Dr. Jeff Dahn

Dr. Art McDonald
4—PARTNERSHIPS AND REPUTATION (cont’d)

4.1 Foster and support key external partnerships and relationships with alumni, other universities, governments, businesses and NGOs

- International partnerships: 22 new partnerships (plus 8 renewals) in 17 countries
- Dalhousie continues to perform 98% of industry-supported research in Nova Scotia
- Dal remains the 3rd best university in the U15 for industry-sponsored research on a per capita basis.
- Collaboration among DMRF, IWK and QE II Foundation and Dalhousie for fundraising collaborations for transformative opportunities
- 130 alumni, chapter, Faculty and homecoming events engaging 5,200 alumni, students and friends

4.2 Strengthen the recognition for our academic excellence and reputation at national and international levels

- Positive media coverage on key stories such as Nobel Prize winner Dr. Art McDonald (BSc’64, MSc’65), Killam Prize winner Dr. Axel Becke, Trudeau Fellow Jocelyn Downie, Royal Society Fellows, Dr. Jeff Dahn honoured with inaugural Governor General’s Innovation Award and student successes
- Capacity attendance for Nobel Prize winner Dr. Art McDonald’s lecture, and campus visit from former astronaut and Dal graduate Kathryn Sullivan (PhD’78)
- 80 Academic All-Canadians, representing over 30% of our student-athlete body
- Launch of MacEachen Institute for Public Policy and Governance
- Professors Mary Anne White (Chemistry), Frederic Wien (Social Work) and Susan Sherwin (Philosophy) awarded the Order of Canada
- From July 2015 to June 2016, Dalhousie welcomed a wide range of government representatives and officials, including former prime minister the Right Honourable Jean Chretien, former MP the Honourable Bob Rae, Nova Scotia Premier Stephen McNeil, five federal ministers, one senator, the deputy premier of Nova Scotia, seven provincial ministers, four MPS, two MLAs, the US Ambassador, the mayor of Halifax, two provincial and one federal deputy minister, the Clerk of the Privy Council and Canada’s Chief Public Health Officer
- Media coverage is a key reputation driver, with media pitching a key tactic to increase coverage; media pitching increased from 104 in 2014/2015 to 245 in 2015/2016, with overall media mentions increasing by 9% year over year

4.3 Develop a plan to secure and maintain top 200 status

- Dal ranked 125th most international university in the world in 2016 (from 95th in 2015), 5th amongst 13 Canadian universities featured
- Dal ranked 201-250 in Times Higher Education (THE) World University Rankings (from 226-250 in previous release); and ranked 277 in Quacquarelli Symonds World University Rankings (QS) (from 235 last year)
- Dal ranks amongst the world’s elite institutions in 15 subjects in QS World University Rankings by Subject, compared to 13 in the previous release
- In-depth analysis completed on three ranking systems and communication plan related to them prepared
4.4 Prepare for Dalhousie’s 200th Anniversary in 2018
- Steering and planning committees in place, environmental scan completed and website launched
- Consultation and engagement has included 20 brainstorming sessions with 750 participants; 25 internal/external planning meetings; and 400 ideas submitted
- 200+ Dal Originals nominations received with 52 selected
- Visual identity and creative platform developed
- Six Faculty project plans submitted for approval; four nearing completion; three in early planning; project plans under development for Ancillaries, Libraries, Facilities Management and Human Resources
- Five provincial and two national partnership initiatives under discussion

4.5 Attract additional external investment
- 4-year funding MOU with Province of Nova Scotia, covering 2015–2019
- Annual provincial operating grant increased by 1% for Halifax campuses
- Campaign readiness assessment completed; campaign funding underway
- Overall fundraising commitments for fiscal 2015/2016 projected at $32.8M compared with $27M in 2014/2015, the highest level in 4 years
- ProjectDal crowdfunding platform had five successful fundraising results, including student refugee project which raised over $30k
- IDEA Building campaign now at 89% of the $25M goal, with lead naming levels finalized and including major gift for ideaHUB
- Planned giving increased from $5.7M in 2014/2015 to $6.7M in 2015/2016
5—INFRASTRUCTURE AND SUPPORT

GOAL: BUILD OUR INSTITUTIONAL CAPACITIES  Our efforts are focused on creating and supporting a diverse and inclusive workforce; the strategic, efficient and effective management of funds for the renewal, replacement and expansion of buildings, property and infrastructure; and attracting and managing revenue from a variety of sources. While fostering an inclusive and diverse workforce is an ongoing task, this year we have taken concrete steps to improve our diversity and inclusiveness, work that will continue to enrich and engage our community.

SUCCESS STORY: COMMITMENT, REFLECTION, ENGAGEMENT, ACTION  Dalhousie has committed itself to fostering a collegial culture grounded in diversity and inclusiveness (Priority 5.2). While there is significant work to be done, over the last year the university has built noticeable momentum with key reports and responses offering opportunities for the university community to reflect on our past, engage with our communities and embark on action to bring that better future into being. Reports, including the Truth and Reconciliation Commission of Canada’s Calls to Action; the Backhouse Report of the Task Force on Misogyny, Sexism and Homophobia in Dalhousie University Faculty of Dentistry; the Belong Report; the report on Aboriginal and African Canadian Students Access and Retention and the Restorative Justice Report on the Faculty of Dentistry, assisted in guiding activities in 2015/2016. As well, the university’s first census of faculty, staff and students, Be Counted, was completed. This census provides workforce analysis that assists in informing employment equity planning with faculties and administrative units and is a critical component to identifying and removing barriers to full and active participation in the workplace of equity group members and promoting inclusion on campus. As well, the census helps Dalhousie complete the first step in the Federal Contractors Program compliance process for employment equity to help address discrimination, specifically in hiring, promotion and retention. Other initiatives taken this year include ongoing updates to university hiring policies and practices; regular updates to Senate; development of the 5.2 Steering Committee; hiring of the executive director diversity and inclusiveness and the special advisor diversity and inclusiveness; review of policies; and presentations by several renowned diversity and inclusiveness speakers. Academic initiatives such as the approval of a minor in Black Studies and the launch of a minor in Indigenous Studies have been undertaken. A key tenet of the approach which guides the university’s action in all of these areas is captured in Dalhousie’s Strategic Plan: “…shared understanding includes a vision of inspiration and impact, inspiring our scholarly community to make a difference in the world….It is a mission deeply rooted in our history and informed by a desire to transform the lives of students from Nova Scotia, Canada and around the world.” This statement captures an essential principle for inclusiveness, a guide for ensuring that those most affected by any decision have a voice in the conversation, a vote in the decision-making and a hand in the action that follows. At Dalhousie, the conversation is ongoing, as we embrace opportunities to improve our diversity and inclusiveness.
5.1 Develop a human resource strategy that allows us to attract, support and reward the best faculty and staff

- Talent Management section established through restructuring in HR and Director, Talent Management appointed
- Human Rights, Equity, Harassment and Prevention (HREHP) Office mandate and structure review nearing completion
- Dalhousie successfully recruited 93.6% of first choice candidates in 2014/2015, which includes 90.9% of first choice candidates for permanent positions, compared to 87.5% of first choice candidates in 2013/2014 (including 81.6% permanent positions)

5.2 Foster a collegial culture grounded in diversity and inclusiveness

- Executive Director Diversity and Inclusiveness; Special Advisor Diversity and Inclusiveness; and Education and Outreach Advisor, HREHP appointed and third advisor position created to help address sexual harassment prevention, education and support
- Two new professors hired under Dalhousie’s growing Diversity Faculty Awards program (oceanography and chemistry)
- Equity hiring processes updated including enhancement of equity statement on job ads
- Be Counted Census completed, with 81% of full-time and permanent part-time employees taking part, and 13% of students
- Promoting Leadership in health for African Nova Scotians (PLANS) and the Aboriginal Health Sciences Initiative (AHSI), Dalhousie programs that support Aboriginal and African Nova Scotian students considering careers in health care, receive up to $1M gift from U.S.-based Johnson Scholarship Foundation, to match donor gifts
- Variety of initiatives underway in FASS, including analyses of the place of inclusivity and diversity in curricula and establishment of Culture of Respect in Computer Science Committee (CoReCS)
- Minor in Black Studies approved
- Indigenous Studies minor launched Fall 2015 with 78 students taking part in two new core courses; Elder-in-residence program established as a cornerstone of the program
- Dal Thrive mental wellness initiative launched; training introduced for Blue Elephant in the Room mental health program for staff, students and faculty

5.3 Develop a multi-year, integrated budget

- Initial round of aligning Faculty budgets with Faculty strategic plans held or completed

5.4 Reduce the deficit of our pension plan

- Collaborative process between employee groups and university management resulted in an amendment to the Dalhousie University Staff Pension Plan which changes the manner in which interest is credited under the Plan, but does not impact the value of the defined benefit
5.5 Enhance our infrastructure with a multi-year capital plan that promotes environmentally sustainable development

- Wallace McCain Learning Commons opened October 2015; LEED Silver targeted ($6M)
- Collaborative Health Education Building opened December 2015; LEED Gold targeted ($34M)
- DSU renovations to Student Union Building addition and renovation underway, scheduled for completion in August 2016; LEED Gold targeted ($10.7M)
- Construction underway for new Fitness Centre, scheduled for completion in Spring 2018; LEED Gold targeted ($23.3M)
- IDEA project augmented with ideaHUB; detailed design phase to be initiated following review and approval of plan at the June, 2016 Board of Governors meeting; LEED Gold targeted ($25M)
- Dentistry Building and Clinic renewal Phases 1 & 2 complete; remaining phases to be complete by Spring 2019 ($26M)
- Tupper Building Energy Performance contract underway; will result in annual savings of over $600k ($12.7M)
- Financial analysis completed on past capital spending

5.6 Improve the quality and inventory of research and teaching spaces

Teaching and Learning Spaces

- $3.5M in upgrades to teaching and learning spaces and equipment, including $712k Grad Student Collaboration Centre in the Weldon Law Building and $450k amalgamation of two dated, 50-seat Life Sciences Centre classrooms into one modern 120-seat room

Research

- $3.3M in renovations for research labs and equipment, including $1.1M renovation in Life Sciences Centre for Psychology research space

5.7 Improve the effectiveness and efficiency of administrative and operational processes aligned with our academic mission

- A centrally led team supported by Industrial Engineering students applied LEAN Methodology for Higher Ed to improve travel claim process, payment processing and graduate student personal information profiles, and developed tool for leading process improvements for use by other Dal employees
- Developed a multi-year framework (including financial projections) for information technology infrastructure renewal and enhancement
### 2015/2016
DALHOUSIE BY THE NUMBERS

<table>
<thead>
<tr>
<th>Total Enrolment</th>
<th>Undergrad Students</th>
<th>Graduate Students</th>
<th>Medical Residents</th>
<th>Grad. Cert/Dip</th>
<th>Masters</th>
<th>Doctoral Full-Time</th>
<th>Post-Doc Fellows</th>
</tr>
</thead>
<tbody>
<tr>
<td>18,731</td>
<td>15,468</td>
<td>3,835</td>
<td>572</td>
<td>62</td>
<td>2,546</td>
<td>655</td>
<td>143</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alumni</th>
<th>Faculties</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>130,000+</td>
<td>13</td>
<td>1,002</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Budget</th>
<th>Regular Staff</th>
<th>Total Research Funding</th>
<th>Research Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>$391M</td>
<td>2,330</td>
<td>$136M</td>
<td>969</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degrees Granted</th>
<th>Bachelor's Degrees</th>
<th>First Professional</th>
<th>Master's Degrees</th>
<th>Ph.D.</th>
<th>Grad Diplomas</th>
<th>Undergrad Diplomas</th>
<th>Undergrad Certificates</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,377</td>
<td>2,589</td>
<td>329</td>
<td>1,011</td>
<td>98</td>
<td>16</td>
<td>307</td>
<td>27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research Centres</th>
<th>Canada Research Chairs</th>
<th>Industrial Research Chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>45</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>International Partnerships</th>
<th>International Partners</th>
<th>Partnering Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>309</td>
<td>244</td>
<td>65</td>
</tr>
</tbody>
</table>
OUR WAY FORWARD

By continuing our shared work, we will make the vision of our strategic direction a reality.

Stay informed and get involved at DAL.CA/FORWARD.