



ADVANCING SRC, INNOVATION & INTERNATIONALIZATION AT RYERSON: Update to the Senate Committee

**Wendy Cukier, Vice President, Research and Innovation
January 26, 2016**

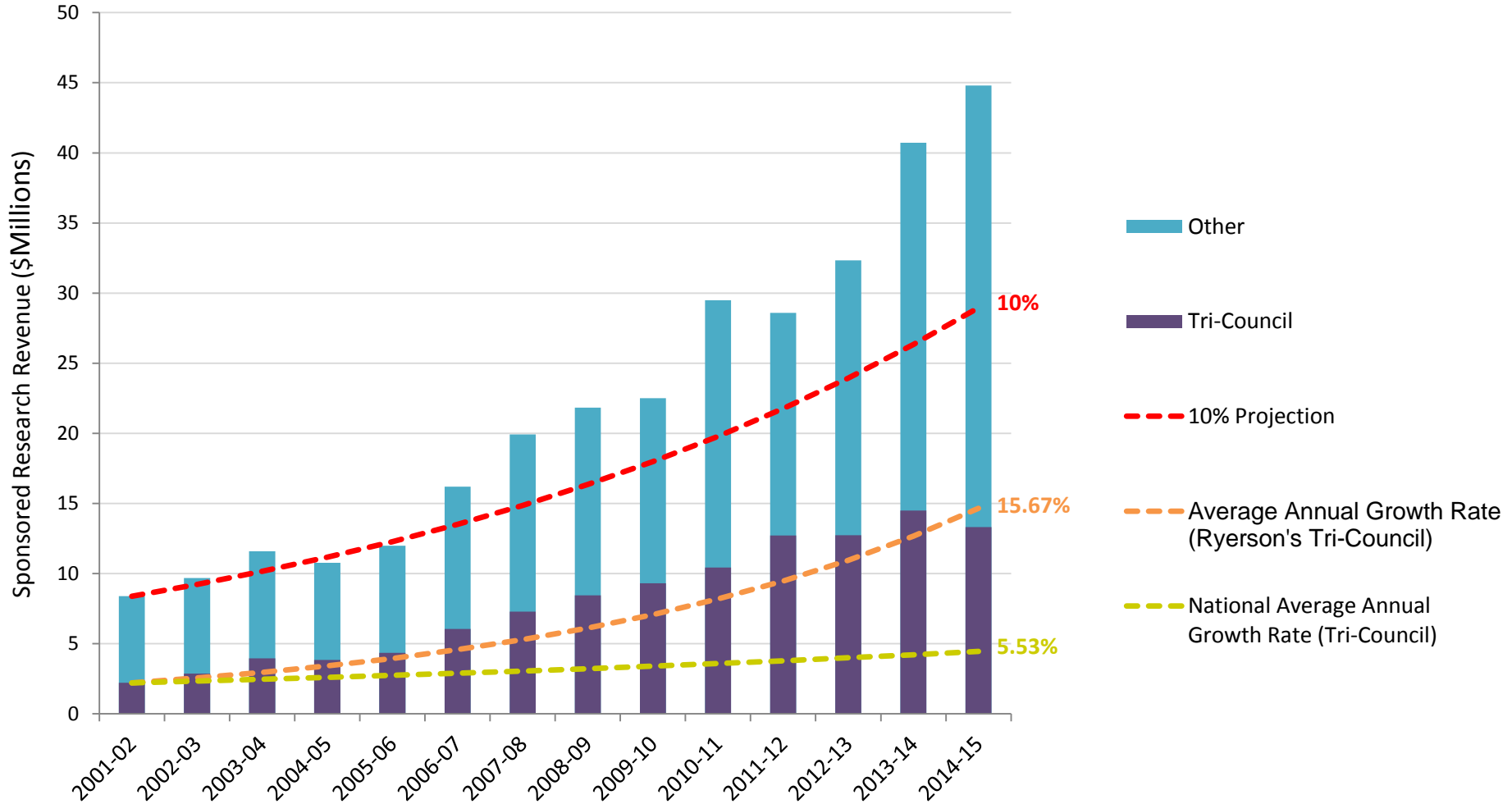
AGENDA

- SRC GOALS AND STATUS
- WHY IS SRC IMPORTANT?
- QUESTIONS

GOAL 1: Increase research excellence, quality and participation through support to all researchers at all stages

- Attract greater funding by providing a range of supports suited to researchers at every stage of the research process and throughout their careers.
- Conduct surveys and assessments to better understand the diverse SRC needs of our students and faculty across disciplines and stages of development (e.g., how to support mid-career faculty).
- Enhance facilitation, support, and service orientation.

Impact: \$44.8 Million Research Funding



CANADA'S TOP
50
 RESEARCH
 UNIVERSITIES

11th

Among Non-Medical
 Universities
 in Canada

TOP

In growth among
 ALL Universities

25.9%

Increase over previous
 year

-1.6%

Average decrease
 among top 50

5

| Rank | | University | Sponsored Research Income | | |
|------|------|---|---------------------------|--------------|--------------------|
| 2014 | 2013 | | FY2014 \$000 | FY2013 \$000 | % Change 2013-2014 |
| 1 | 1 | University of Toronto* ++ | \$1,041,374 | \$1,110,663 | -6.2 |
| 2 | 3 | Université de Montréal* (a) | \$548,849 | \$527,971 | 4.0 |
| 3 | 2 | University of British Columbia* | \$547,027 | \$566,789 | -3.5 |
| 4 | 4 | McGill University* | \$477,843 | \$465,209 | 2.7 |
| 5 | 5 | University of Alberta* | \$462,891 | \$417,757 | 10.8 |
| 6 | 8 | Université Laval* | \$324,803 | \$306,831 | 5.9 |
| 7 | 6 | University of Calgary* | \$324,212 | \$328,736 | -1.4 |
| 8 | 7 | McMaster University* | \$310,608 | \$322,502 | -3.7 |
| 9 | 9 | University of Ottawa* | \$275,266 | \$297,813 | -7.6 |
| 10 | 10 | Western University* | \$237,894 | \$254,457 | -6.5 |
| 11 | 14 | University of Saskatchewan* | \$195,264 | \$157,976 | 23.6 |
| 12 | 12 | University of Waterloo | \$177,425 | \$166,920 | 6.3 |
| 13 | 16 | University of Manitoba* | \$154,280 | \$137,281 | 12.4 |
| 14 | 11 | Queen's University* | \$148,486 | \$189,990 | -21.8 |
| 15 | 13 | University of Guelph | \$146,657 | \$158,255 | -7.3 |
| 16 | 15 | Dalhousie University* | \$128,084 | \$148,879 | -14.0 |
| 17 | 19 | Université de Sherbrooke* | \$121,938 | \$120,969 | 0.8 |
| 18 | 20 | Simon Fraser University | \$103,130 | \$102,643 | 0.5 |
| 19 | 18 | University of Victoria | \$95,428 | \$124,779 | -23.5 |
| 20 | 17 | Memorial University of Newfoundland* (b) | \$87,782 | \$127,816 | -31.3 |
| 21 | 21 | York University | \$78,719 | \$72,040 | 9.3 |
| 22 | 22 | Université du Québec à Montréal | \$70,384 | \$71,262 | -1.2 |
| 23 | 23 | Institut national de la recherche scientifique+ | \$61,903 | \$55,778 | 11.0 |
| 24 | 24 | Carleton University | \$59,144 | \$55,160 | 7.2 |
| 25 | 26 | Concordia University | \$45,670 | \$44,358 | 3.0 |
| 26 | 25 | University of New Brunswick | \$42,505 | \$49,115 | -13.5 |
| 27 | 27 | Ryerson University | \$40,782 | \$32,400 | 25.9 |
| 28 | 28 | University of Windsor | \$30,486 | \$29,734 | 2.5 |
| 29 | 29 | Université du Québec à Chicoutimi | \$27,436 | \$27,418 | 0.1 |
| 30 | 31 | École de technologie supérieure+ | \$26,614 | \$23,883 | 11.4 |
| 31 | 30 | Université du Québec à Trois-Rivières | \$22,942 | \$24,039 | -4.6 |
| 32 | 32 | Lakehead University* | \$22,717 | \$22,465 | 1.1 |

Big Wins

CFI INNOVATION FUND

\$729K
Ali Mazalek
(FCAD)



SSHRC PARTNERSHIP GRANT

\$2.5M
Henry Parada (FCS)



NSERC STRATEGIC GRANTS

\$5M
Bala Venkatesh (FEAS)



GOAL 2: Expand SRC partnerships

- Proactively identify local, national and international partners and opportunities in industry, government, community and at other academic institutions.
- Support multi-stakeholder applications.
- Establish and grow multi-institutional networks.

RECODE

Fuelling Social Innovation and
Entrepreneurship in Higher Education

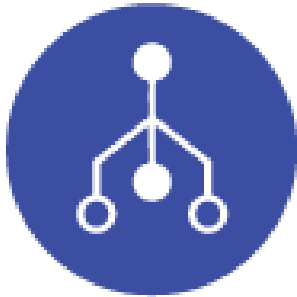
SI drive



More than 200 Research Collaborations



GOAL 3: Interdisciplinary collaboration across themes



DIGITAL MEDIA & TECHNOLOGY



ENERGY & SUSTAINABILITY



HEALTH & WELL BEING



TECHNOLOGICAL & INDUSTRIAL INNOVATION



CITY BUILDING & SOCIAL JUSTICE



MANAGEMENT, ENTREPRENEURSHIP & COMPETITIVENESS



DESIGN, CULTURE & CREATIVE INDUSTRIES



TEACHING & LEARNING FOR THE NEW ECONOMY

More than 125 Centres, Institutes & Labs

Ryerson University

Ryerson Urban Water



TED ROGERS SCHOOL OF MANAGEMENT
RYERSON UNIVERSITY

CANADA-CHINA INSTITUTE FOR BUSINESS & DEVELOPMENT
加中商业与发展中心



Ryerson City Building Institute



Institute for Stress and Wellbeing Research



ProCom Centre for Communicating Knowledge



GOAL 4a: Expand commercialization, knowledge translation and mobilization

Invention Disclosures

2011-12: **24**

2012-13: **28**

2013-14: **30**

2014-15: **34**

Patents Supported

2011-12: **10**

2012-13: **9**

2013-14: **13**

2014-15: **9**

7 Active Spin-Off Companies with **over \$8 million** in funding: 7D Surgical, AWE, Bionik Labs, EidoSearch, Flybits, TAD, YYZ.

2 Commercialization Specialists supporting faculty members.

21 Active IP **Licenses** as of January 1, 2016.



Ontario

Social Enterprise

Demonstration Fund (SEDF)

GOAL 4b: Support increased SRC dissemination and to reputation

InformationWeek

Government

CONNECTING THE GOVERNMENT
TECHNOLOGY COMMUNITY

Privacy By Design: Protecting
Data From 'Get It Right'

CANADIAN BUSINESS

3-D printing gives everyone a chance to be the next Edison

That's good news for society as a whole

CBCnews | World

Scanner gives surgeons real-time 'road map'

...engineered by team of doctors, engineers from Sunnybrook, Ryerson

THE ECONOMIC TIMES

\$5 million to be raised next fiscal:
BSE start-up incubator

THE GLOBE AND MAIL

PRESTON MANNING

Let's train our leaders to...

Today's Parent
Celebrate your family

Change kids healthier, more active: Study

...isn't surprised that a new study that reveals that kids aren't as active if they aren't allowed to go out on their own or with friends.

FINANCIAL POST

Canadian managers slow to adopt
mobile missing next wave of
technical revolution

business.ca
Where technology meets business

Human Resources Sales and Marketing
**CFL hunts for a high tech game changer
at SportsHack 2015**

Awards and Recognition



**ASSOCIATION OF ONTARIO
MIDWIVES LIFETIME ACHIEVEMENT**
Vicki Van Wagner (FCS)

**CRC ALLOCATION
PROGRESSION:**
2008: 12
2010: 15
2012: 17
2014: 19

RSC Fellow

Martin Antony (Arts)

**Professional Engineers
Ontario Research and
Development Award**

David Naylor (FEAS)

Early Researcher Award

Catherine Beauchemin (FOS)
Roberto Botelho, CRC (FOS)
Naomi Koerner (Arts)
Julia Spaniol, CRC (Arts)

**Royal Society College,
New College Members**

Sepali Guruge (FCS)
Alexandra Mazalek, CRC (FCAD)
Catherine Middleton, CRC
(TRSM)



**RESEARCH MATTERS –
TOP 50 RESEARCHERS**
Ben Barry (FCAD)



**FELLOW OF THE
CANADIAN ACADEMY OF
ENGINEERING**
Sri Krishnan (FEAS)

**FELLOW OF THE CANADIAN
PSYCHOLOGICAL ASSOCIATION**
Jean Paul Boudreau (ARTS)



GOAL 5: Provide opportunities for students

SEB

FELLOWSHIPS FOR
SOCIAL INNOVATION



npower



Mitacs



Ontario Centres of
Excellence

**Summer
Company**

GOAL 6: Expand engagement - more focused and deeper Internationalization

- 141 international partners in 36 countries
- 237 inbound and 217 outbound exchange students
- \$421K from IDRC for Cecilia Rocha (FCS) project *“Scaling up small-scale food processing: A strategy to promote food security among women subsistence farmers in rural Vietnam”*
- In China, participated in Premier's mission, MOUs with Tsinghua University and 3 Science Parks
- In South Africa, groundbreaking collaboration with the Bombay Stock Exchange Institute and the University of the Witwatersrand
- Ryerson University Lifeline Syria Challenge in collaboration with OCADU, U of T, York, and others: to date, 75 sponsorship groups, \$2.7 million raised, 1,000 volunteers and offers experiential learning opportunities for students

GOAL 7: Streamline administration and strengthen infrastructure (including space)

- Improve information management infrastructure, such as searchable databases.
- Institute more formal training, coaching and mentoring processes.
- Provide targeted services such as assistance with statistical analysis, writing, editing, administration, and outreach.
- Increase resources and ensure the efficient use of the resources that we already have (e.g. physical space in our facilities).

GOAL 8: Strengthen performance metrics and accountability frameworks

Stage 1: Applications

- Total number of grant applications
- Percentage of faculty with a grant application
- Average number of grant applications per faculty
- Application success rate

Stage 2: Grants

- Total number of grants
- Total dollar value of grants
- Percentage of faculty with a grant *
- Average number of grants per faculty *
- Average dollar value of grants per faculty *
- Dollar value of grants participation index

Stage 3: Outputs

OVPRI (Internal Data Source):

- Number of books
- Number of chapters in books
- Number of refereed journal papers

Creative Activity Outputs:

- Number of adjudicated creative works (e.g., juried exhibitions, public stagings/broadcasts, architectural works/designs, exhibits of visual arts/design, published creative writing, etc.)

External Data Source:

- Number of publications
- Average of relative impact factors (ARIF)
- Average of relative citations (ARC)
- International collaboration rate
- Number of publications within the top 10% RIF
- Number of publications within the top 10% RC
- Commercialization performance

Student Research

- Student participation in faculty research
- Student research publications
- Student conference presentations

Structural Enhancement

- Research Centres
- Research Networks
- Faculty Exchanges
- Visitors
- Faculty Mentorship

Legend

Core metrics (university-wide)

Supplementary metrics

* denotes currently published progress indicators

Strategic Mandate Agreement (SMA): MTCU Graduate Allocation Metrics – PhD

| Metric | Timeframe | Weight | Ryerson Share |
|--|--------------|--------|---------------|
| Research Capacity | | | |
| Total sponsored research | 3-yr average | 10% | 1.1% |
| Total Research Chairs filled | Nov 2013 | 10% | 1.8% |
| PhD degrees awarded | 3-yr average | 10% | 0.8% |
| Graduate scholarships | 3-yr average | 10% | 1.9% |
| Research/Graduate Focus | | | |
| PhD to undergraduate degrees awarded | 3-yr average | 10% | 1.0% |
| Research Productivity | | | |
| Normalized Tri-Council funding per FT faculty | 3-yr average | 10% | 2.7% |
| Publications | 5-yr total | 10% | 1.8% |
| Citations per FT faculty | 5-yr total | 10% | 1.3% |
| International Competitiveness* (Times Ranking) | 3-yr average | 10% | 0.0% |
| Enrolment Performance | | | |
| Non-negative eligible PhD growth share | Over 2008-09 | 10% | 18.2% |

* Average of rank (or of best-of-range if ranked in a range such as 276-300) for the three most recent years in Times Higher Education Ranking. Normalized relative to best ranked. Allocated based on share of normalized scores.

SUMMARY: WHAT SRC ACTIVITY BRINGS TO THE UNIVERSITY

- University mission: create, disseminate, apply knowledge
- Ryerson's mission: meet societal needs
- Resources to support faculty and students
- Inform teaching and learning
- Drive economic and social development
- Strengthens partnerships
- Drives rankings and reputation



Thank You.