



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

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

# AGENDA

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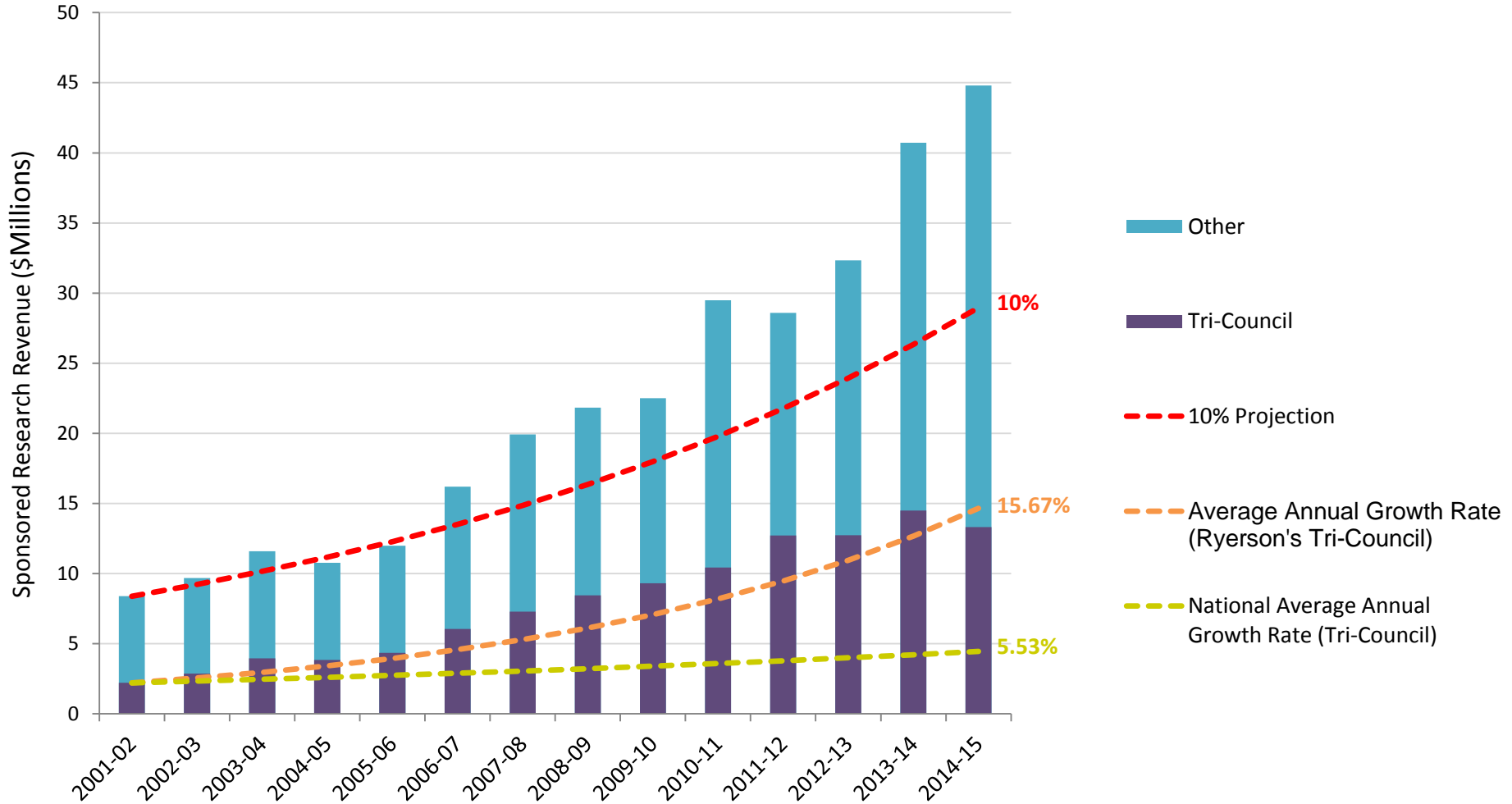
- SRC GOALS AND STATUS
- WHY IS SRC IMPORTANT?
- QUESTIONS

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

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- 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

**11<sup>th</sup>**

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

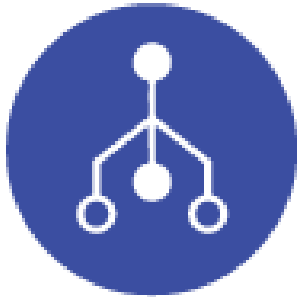


# More than 200 Research Collaborations





# 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

**FINANCIAL POST**

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

**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.

**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)

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- 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
<b>Research Capacity</b>			
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%
<b>Research/Graduate Focus</b>			
PhD to undergraduate degrees awarded	3-yr average	10%	1.0%
<b>Research Productivity</b>			
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%
<b>Enrolment Performance</b>			
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

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- 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.**