STRATEGIES, TARGETS AND METRICS FOR DIVERSITY IN SCIENCE

Danika Goosney, Ph.D.
Associate Vice President
Tri-agency Institutional Programs Secretariat

What gets measured, gets done.

Data are important to:

- Understand who is included – and not included – in the research community (i.e. monitor for systemic barriers);
- Monitor the advancements in equity, diversity and inclusion (EDI); and
- Measure the value of diversity;

It is also important to assess work environments, policies and practices to ensure academia is inclusive, meaning all researchers are supported in order to meet their full potential.

CANADA RESEARCH CHAIRS

- Created in 2000 to make Canada a location of choice for top researchers
- 2,000 Chairs established across the country: 45% NSERC; 35% CIHR, and 20% SSHRC.
- Approximately $265 million invested per year to attract and retain world-class researchers in engineering and the natural sciences, health sciences, humanities, and social sciences.

- Launched in 2008 to attract and retain the world's top-tier researchers in targeted science and technology priority areas.
- Awards world-renowned researchers and their teams up to $10 million over seven years to establish ambitious research programs at Canadian universities.
- Currently 26 chairholders at 17 universities.

CANADA FIRST RESEARCH EXCELLENCE FUND

- Created in 2014 to support research in areas that create long-term economic advantages for Canada.
- CFREF invests approximately $200 million per year to support Canada's postsecondary institutions to become global research leaders.
- 18 CFREF grants have been awarded to 17 institutions.

CANADA 150

RESEARCH CHAIRS

- Announced in Budget 2017, invests $117.6 million to enhance Canada's reputation as a global centre for science, research and innovation excellence, in celebration of Canada's 150th anniversary.
- Provides Canadian universities with a one-time investment to attract top-tier, internationally based scholars and researchers (including Canadian expatriates) to Canada.

RESEARCH SUPPORT FUND

- Created in 2003 (as the Indirect Costs Program) to support the goal of making Canada one of the world's top countries in research and development
- Assists Canadian institutions with the indirect costs associated with managing the research funded by the three federal research granting agencies.
- Currently invests $369 million to ensure that federally funded research is conducted in world-class facilities with the best equipment and administrative support available.

What we know

Canada Research Chairs

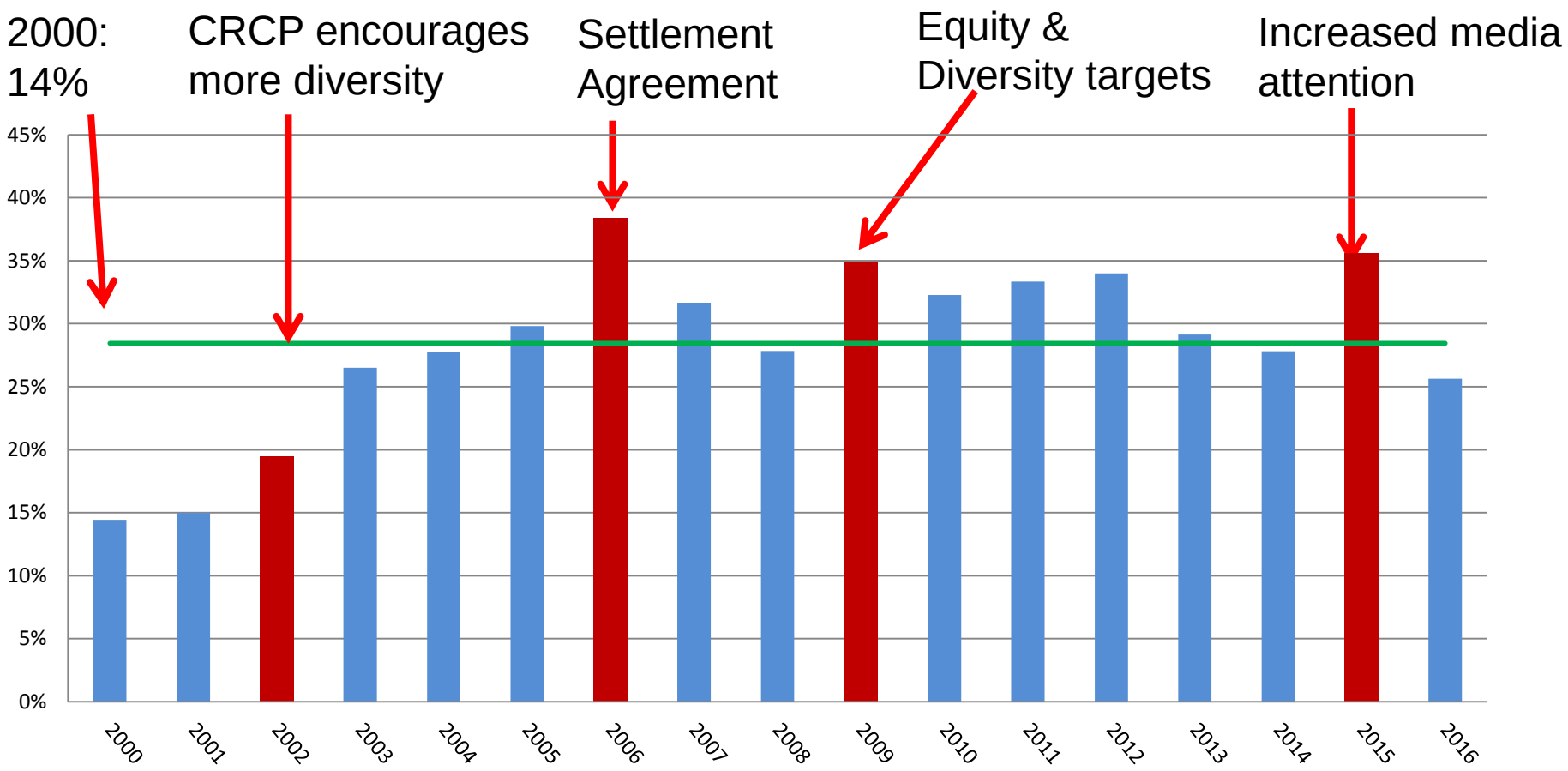
- 30% women
- 70% men
- Only 20% of Tier 1 CRCs are women (higher award, longer term)

Canada Excellence Research Chairs

- 1/26 is a woman

Image courtesy of PNAS

What we know


2000: 14%
CRCP encourages more diversity
Settlement Agreement
Equity & Diversity targets
Increased media attention
45%
40%
35%
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25%
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Equity, Diversity and Inclusion Action Plan

"The trouble with girls working in science labs…You fall in love with them, they fall in love with you and when you criticize them, they cry."

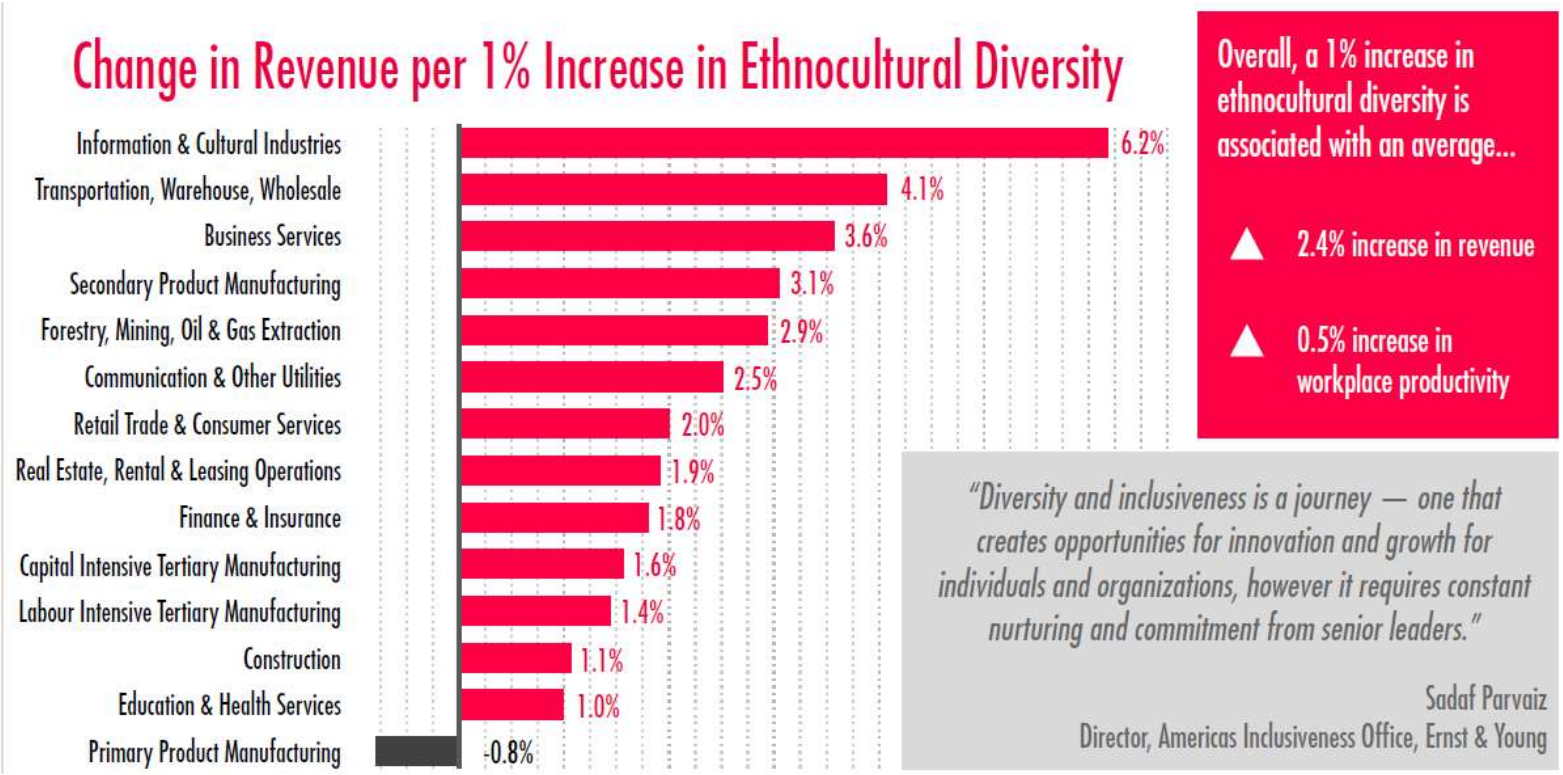
Tim Hunt, Nobel Laureate 2015

Going forward

- Continued monitoring and close collaboration with institutions to ensure bolstered EDI

- Repercussions for institutions that do not systematically, strategically and sustainably consider EDI in administration of awards

Diversity equals more innovation and better research



Data Source: Statistics Canada (2011)

Graph Source: *The Diversity Dividend* (B. Momani and J. Stirk)

Thank you

Questions/comments:

Danika.Goosney@chairs-chaires.gc.ca
Marie-Lynne.Boudreau@chairs-chaires.gc.ca
Sally.Booth@chairs-chaires.gc.ca

Equal Opportunities in Research and Academia –

Advancing Gender Equality in the DFG Funding System

Dr Sonja Ochsenfeld-Repp
Deputy Head of Division, Quality and Programme Management
German Research Foundation (DFG)

Gender Summit 11, Montreal, 8 November 2017

What approaches does the DFG use to promote gender equality?

A package of measures: Challenge – Funding – Research

Challenge
"Fix the numbers"

Targets for female participation in decision-making bodies and in review processes

Challenge
"Fix the institutions"

Research-Oriented Standards on Gender Equality

Funding
"Fix the numbers"

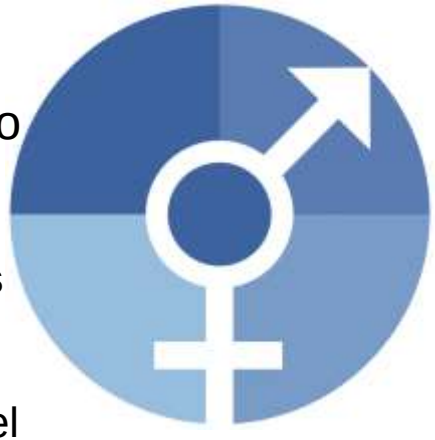
Qualitative gender equality strategy

Research –
„Fix the knowledge"

Gender dimension in research/ Gender in science studies

How does the DFG support gender equality in research?
Through the initiative “Research-Oriented Standards on Gender Equality”

- The DFG is a catalyst in this area
- **Voluntary commitment of DFG member organisations** to Research-Oriented Standards on Gender Equality in 2008
  - Structural and staffing standards for **gender equality strategies at individual universities**
  - Increasing the proportion of female researchers – cascade model



- In 2009, 2011, 2013 three **reports** presented to DFG on implementation status → **classification** (levels 1 to 4)
- Since 2014, **annual quantitative reporting** on gender equality situation
- A **decision-relevant criterion in the review of proposals for coordinated research programmes**
- **Toolbox** of practical examples which serve as useful models www.dfg.de/**toolbox**

How does the DFG support gender equality in research?
Through the initiative “Research-Oriented Standards on Gender Equality”

- **Recent study on implementation and effectiveness**
- **Results**: The “Research-Oriented Standards on Gender Equality” have had a significant impact on the German research system
  - Widespread implementation by member organisations
  - Gender equality has become a strategic leadership task

- Decision on the **future of the “Research-Oriented Standards on Gender Equality”** at the General Assembly in July 2017
  - Renewal of voluntary commitment of member organisations
  - Qualitative reports on key topics (every 2 to 3 years) – peer learning
  - Other aspects of difference to be considered in the medium term

How does the DFG promote gender equality in its area of activity?
Through targets for participation by female researchers

- **DFG decision-making bodies** and their sub-groups
  - Commitment to participation of at least 30%, since March 2017
  - Basis: currently 22% of professors in Germany are women
- On-site/panel and written **reviews**
  - Programme- and subject-specific targets
  - Oriented towards the average proportion of proposals submitted to the DFG by female researchers over the last three years → the aim is to achieve a balance in the peer review system between proposals submitted by and reviewed by women
- **Regular equal opportunity monitoring report** and annual discussion in the DFG Senate
- Central responsibility for gender equality lies with the DFG Executive Board

How does the DFG promote gender equality in its area of activity?
Through a qualitative gender equality strategy – four action levels

- Underlying principle of “challenge and funding/support”; strategy will be fully drawn up in 2017 and implemented by the end of 2018.

- **Instruments:** Modules for researchers with clear gender equality objective

- **Processes:** More women in the review process; awareness-raising on implicit bias effects; uniformity in taking relevant factors into consideration

- **Career/staff development:** Workshops, mentoring, examples of best practice, individual career development

- **Work-life balance:** Workload reduction for serving on statutory bodies, allowances for childcare costs

How does the DFG promote gender equality in its area of activity?
Through funding measures in DFG-funded projects

- **Making allowances for personal situations** when assessing academic achievements in proposals (periods of childcare, etc.)
- **Limitation of publication list** to a maximum of 10 items
- Support for **work-life balance**

- **Staff support for part-time work** by project leaders for family reasons (children, relatives in need of care)
- **Funding for temporary replacements** for project team members who take temporary leave or reduce working hours for family reasons
- **Career development measures** and **promotion of family-friendly structures** at funded institutions (remote working, additional childcare)

Thank you!

Further Information

- about the DFG: **www.dfg.de/en**
- about the Funding Atlas: www.dfg.de/**fundingatlas**
- about all funded projects: **gepris**.dfg.de/en
- on over 24,500 research institutions in Germany: www.dfg.de/en/**rex**
- about promoting equal opportunity: www.dfg.de/**equal_opportunities**
- about the DFG toolbox: www.dfg.de/**toolbox**

CFSG
Chaire pour les femmes en sciences et en génie

Recrutement d'étudiantes au baccalauréat en génie

CRSNG
NSERC

Chaires pour les femmes en sciences et en génie
Chairs for Women in Science and Engineering

Québec

La Fondation

UNIVERSITÉ DE SHERBROOKE

Contexte au Québec

- Faible progression du taux de femmes en génie;
- Meilleure intégration des femmes au travail;
- Plusieurs avantages à la diversité;
- Beaucoup de chemin à faire pour atteindre 30% en 2030;
- ***Il faut s'unir pour réussir!***

Proposition de plan d'action

Objectif 1 : Faire l'état de la situation

Objectif 2 : Susciter l'intérêt des filles envers le génie

Objectif 3 : Créer un milieu inclusif pour les étudiantes

Objectif 4 : Préparer pour des expériences de stages positives

Objectif 5 : Favoriser la diplomation des étudiantes

Objectif 6 : Préparer au marché de l'emploi ou à la maîtrise

Plan d’action stratégique

Objectif 3: Créer un milieu inclusif, attrayant et respectueux pour les étudiantes

Mesure 7: Promotion d'un enseignement équitable auprès de la direction et du personnel enseignant

Action1: Développer et offrir une formation sur l’enseignement équitable

Travailler ensemble

- Pour partager les bonnes et les moins bonnes pratiques;
- Pour générer des plans d'actions efficaces dans toutes les institutions;
- Pour faire évoluer la profession en matière de diversité des genres.

Diversity in STEM Fields

Professor Angela Campbell
McGill University

Important Questions & Potential Solutions

- Why are equity groups underrepresented in the STEM fields?
- What measures have institutions taken that demonstrate promise for success in recruiting and retaining diverse candidates to STEM fields?
- Examples from McGill University

Why are Marginalized Identities Underrepresented in STEM?

- **Sexism & Racism**
  - Overt sexism & racism includes biased hiring, and “chilly climates” (Chech et al., 2011)

- There are also **nuanced effects** of sexism and racism that are more difficult to identify.
  - Confidence (Chech et al., 2011)
  - Family Plans (Chech et al., 2011)
  - Expectations of brilliance (Leslie et al, 2015)
  - Isolation (Johnson, 2011), (Elsevier, 2017)

- The Science Identity

Measures that Demonstrate Promise for Success

Create a science identity that is congruent with out-of-class identity (Tan & Barton, 2010)

- This can begin early
- Make science education relevant to students' out-of-school knowledge.
- Use accessible points of entry

Talk about underrepresentation (Lock & Hazari, 2016)

- Timing is important
- Should focus on the experiences of women in science today

Research underrepresentation (Johnson, 2011)

- Not just white women
- Better gender, race, ethnicity breakdown of statistics in research

Address our own biases (Chachra, 2017)

McGill Initiatives to Increase Diversity in STEM

- **STEM Diversity at McGill**
  - Bringing together STEM students, faculty and staff from diverse backgrounds at McGill
  - Exhibit at Redpath Museum
  - Reception on Ada Lovelace day
  - Colouring book for younger audience
  - McGill Provost's *Task Force on Indigenous Studies & Indigenous Education*

- **Working with youth & schools**
  - Trained educators working with schools at Redpath Museum in English and French
  - The Homework Zone
  - Hot Science/Cool Talks

- **Fostering Support for STEM students**
  - Women in Physics at McGill
  - STEM Support McGill

- **Excellence in STEM education**
  - The T-PULSE Project
  - McGill Freshman STEM Teaching Initiative

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