



UNIVERSITY OF
CALGARY

Going from Good to Great: Building a Successful Research University

Elizabeth Cannon
President and Vice Chancellor
University of Calgary
March 2015

- Setting the vision
- Creating the research plan
- Building and implementing research priority strategies
- Increasing research capacity and excellence
- Measuring success
- Enhancing institutional culture to drive performance

- Opportunity to listen, learn and share
- Builds consensus and alignment for the future
- Articulates vision, mission, values and principles
- Provides clear roadmap for success
- Increases pride through clarity of purpose
- Enhances relationships with external stakeholders
- Establishes framework for decision-making and resource allocation
- Sets stage for 2016-17: 50th Anniversary



**THE UNIVERSITY OF CALGARY
WILL BE A GLOBAL INTELLECTUAL
HUB LOCATED IN CANADA'S
MOST ENTERPRISING CITY.
IN THIS SPIRITED, HIGH-QUALITY
LEARNING ENVIRONMENT,
STUDENTS WILL THRIVE
IN PROGRAMS MADE RICH
BY RESEARCH AND HANDS-ON
EXPERIENCES.**

**BY OUR FIFTIETH ANNIVERSARY
IN 2016, WE WILL BE ONE OF
CANADA'S TOP FIVE RESEARCH
UNIVERSITIES, FULLY ENGAGING
THE COMMUNITIES WE BOTH
SERVE AND LEAD.**

The University of Calgary will be a global intellectual hub located in Canada's most enterprising city. In this spirited, high-quality learning environment, students will thrive in programs made rich by research and hands on experiences.

By our 50th anniversary in 2016, we will be one of Canada's top five research universities, fully engaging the communities we both serve and lead.

1

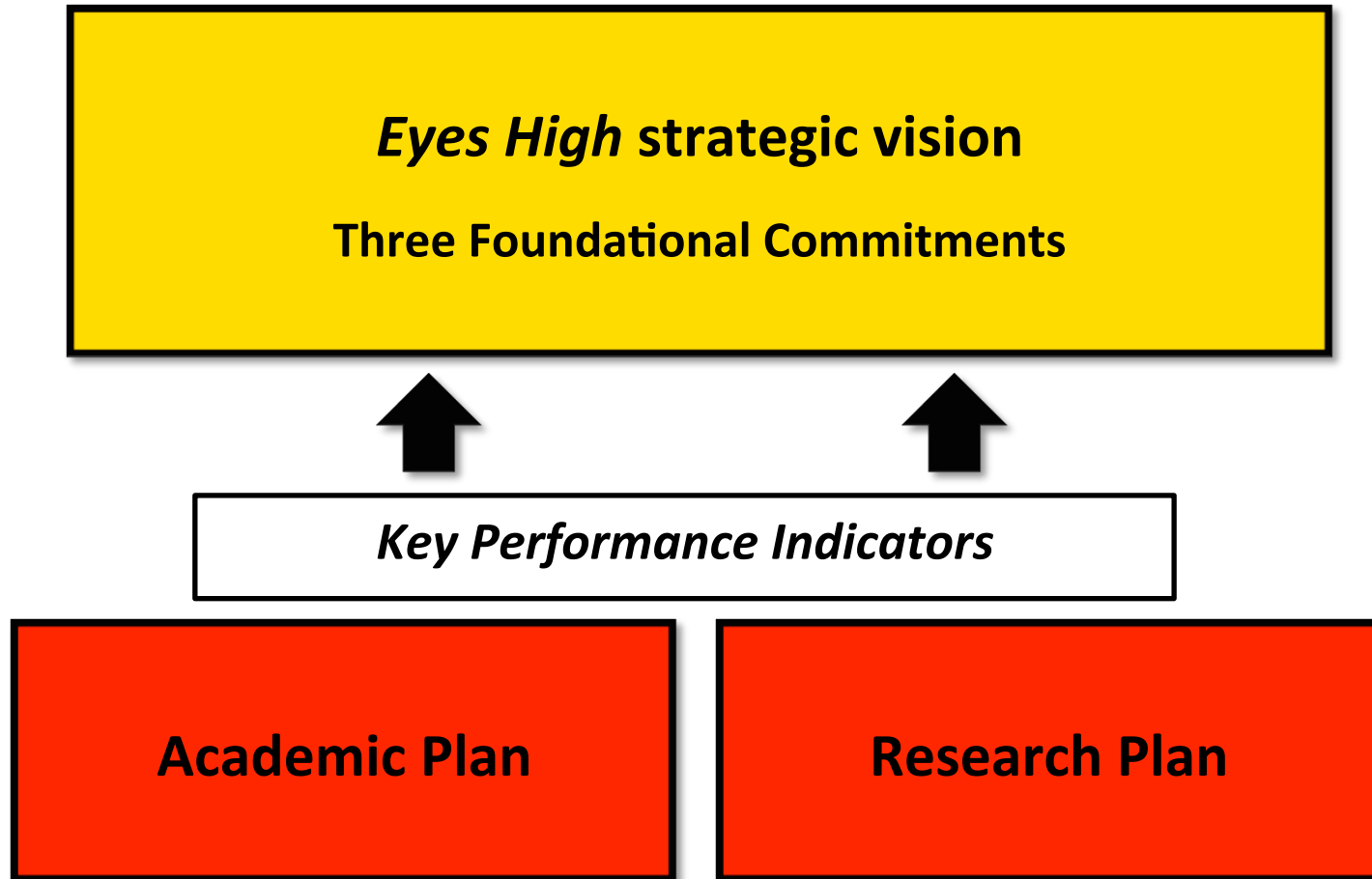
SHARPEN FOCUS ON RESEARCH
AND SCHOLARSHIP

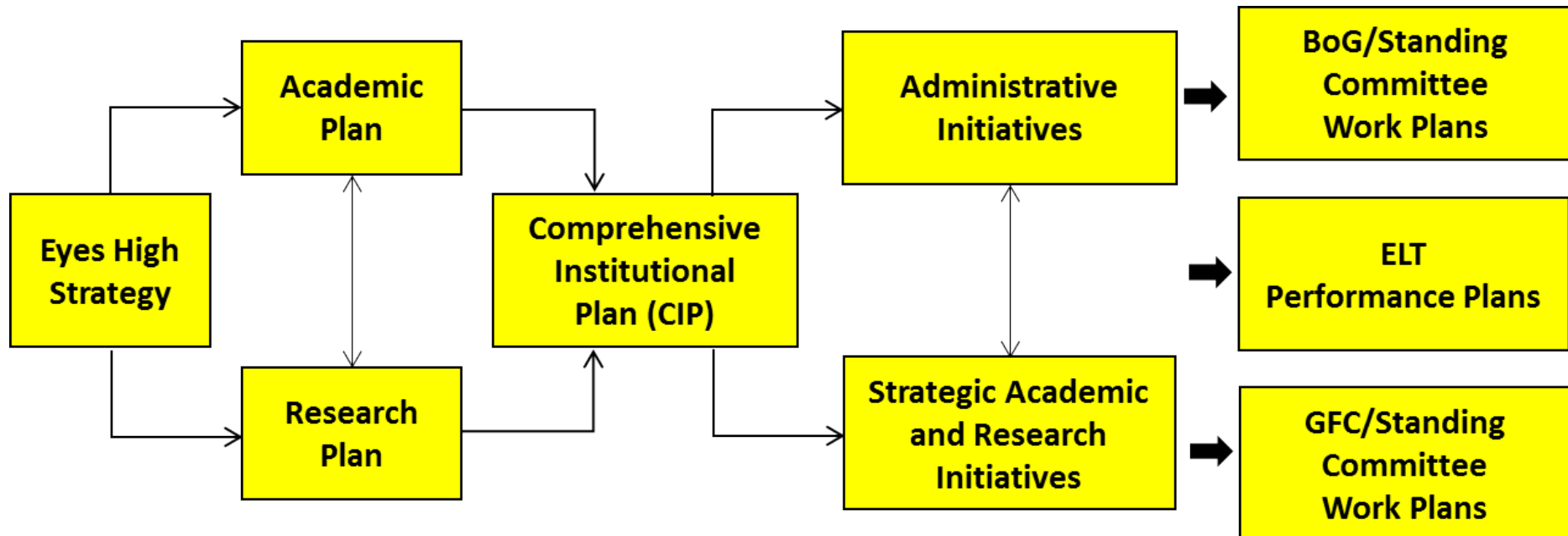
ENRICH THE QUALITY
AND BREADTH OF LEARNING

2

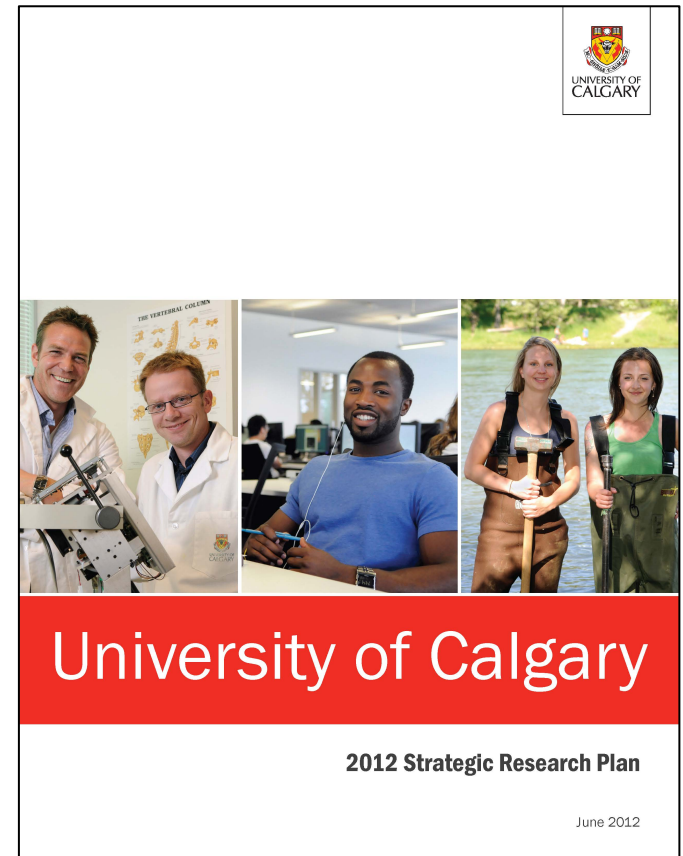
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FULLY INTEGRATE
THE UNIVERSITY
WITH THE COMMUNITY





1. Match our Strengths with Opportunities
2. Increase our Research Capacity
3. Create a Dynamic Environment to Promote Research Excellence



1. Match our Strengths with Opportunities

- What?



Vision

Plans

Strategies

Actions

- How?

Build

**Confederation
of Scholars**



**Town-Halls &
Working Groups**



**Research
Strategy**

**Implement
Strategy!!!**

Strategic Research Plan - Research Priorities

STRATEGIC
RESEARCH THEMES



**Energy
Innovations
for Today and
Tomorrow**



**New
Earth-Space
Technologies**



**Infections,
Inflammation
and Chronic
Diseases**



**Human
Dynamics in
a Changing
World**



**Engineering
Solutions
for Health**



**Brain
and Mental
Health**



**September
2013**



**Summer
2015**



**Summer
2015**



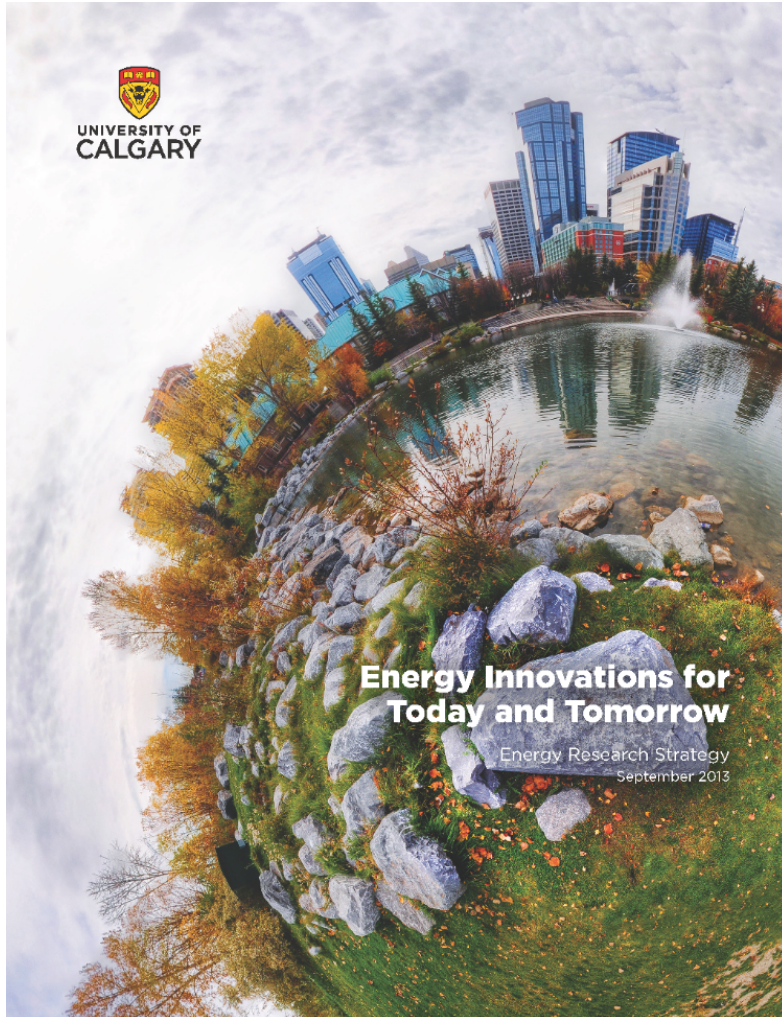
**Summer
2015**



**March
2015**



**March
2015**



Grand Challenges

Unconventional
hydro-carbon
resources

Hydraulic
fracturing

Toward low
carbon energy

Cumulative
effects of energy-
related processes

- Build and expand activities to foster critical mass
 - Suite of speaker series (public and with industry)
 - Symposia and workshops
 - Partnerships with complementary organizations
- Leverage to seize new opportunities
 - Campus Alberta Innovate Program (CAIP) Chairs
 - Canadian Network for Energy Policy Research
 - Carbon Management Canada 2.0
 - Several New Industry Consortia
- Invest in teams to support Grand Challenges
 - \$1M of internal funding allocated
 - External leveraging expected

- **Canada Excellence Research Chair (CERC)**
 - Dr. Steven Bryant, U of Texas at Austin
 - \$20M program with federal gov/provincial gov/industry support
 - New Materials for Unconventional Energy Resources
- **Global Research Initiative in Unconventional Oil & Gas – Beijing Site**
 - Research facility in Beijing to help develop shale gas
 - 4,000 sq m research facility with state-of-the-art labs
 - \$11.25M investment for infrastructure and collaboration
- **Launch of Kinetica Ventures**
 - Energy technology accelerator
 - Access to capital, expertise and relationships to commercialize industry-validated technologies more efficiently and effectively
 - \$3M from the Canada Accelerator and Incubator Program (CAIP)
- **Canada First Research Excellence Fund (CFREF)???**

Other Major Initiatives

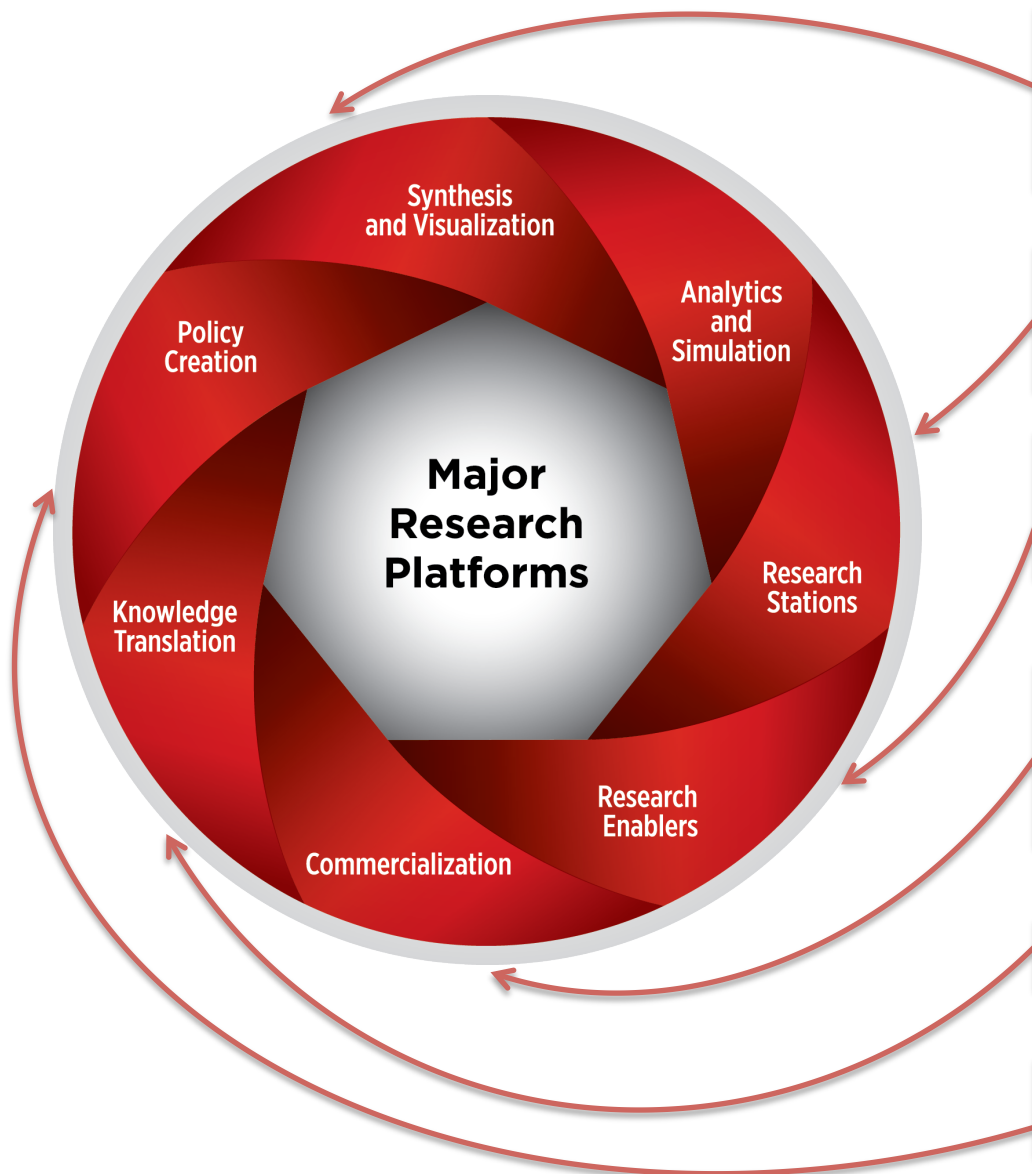
Completed:

- Canada Excellence Research Chair
- Canadian Network for Energy Policy Research
- Carbon Management Canada 2.0 – GFRS
- Global Research Initiative in Unconventional O&G- Phase 1
- Several New Industry Consortia

In Development:

- Global Research Initiative in Unconventional O&G Phase 2 and Phase 3
- Genome Canada – Energy and Mining Centre
- Energy Analytics
- Assessing Cumulative effects of energy related processes

- Policy Creation
- Knowledge Translation
- Commercialization
- Increase our Research Capacity
- Research Enablers
- Research Stations
- Analytics and Simulation
- Synthesis and Visualization



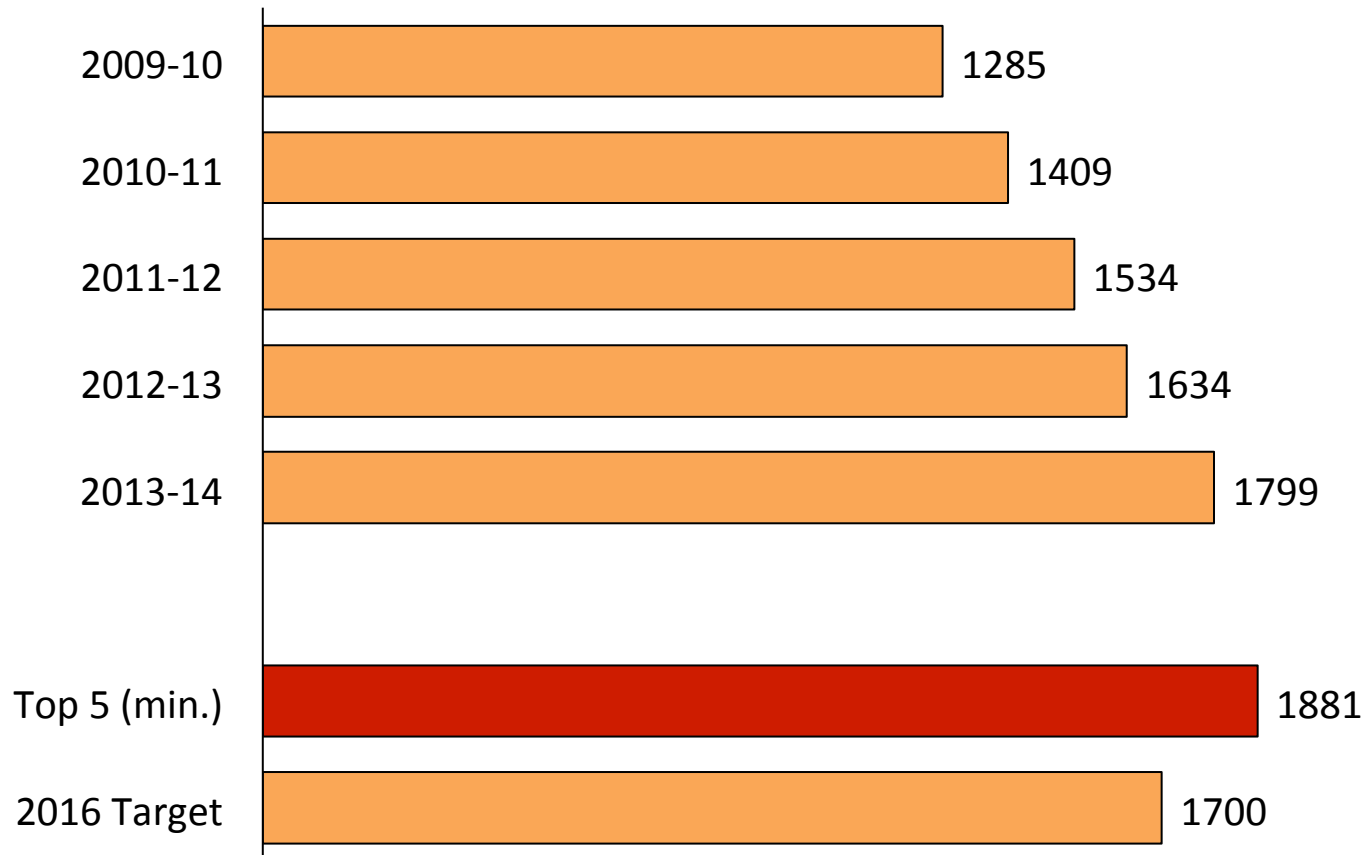
- Academic Committee on Analytics and Visualization
- Partner on AIHS Proposal on Health Analytics
- Arctic Institute of North America
- Kluane Field Station
- Biogeoscience Institute
- Provincial Harmonization of Ethics Completed
- UCARE Implementation Completed
- Committee on Entrepreneurship and Innovation
- Partner with MITACS etc.
- Innovate Calgary
- Committee on Knowledge Translation
- Canadian Network for Energy Policy Research

2. Increasing Our Research Capacity

- Post Doc Recruitment
 - Number of PDF's on campus low relative to peers
 - Highly competitive, 75% aligned to priorities
 - 85 new **Eyes High** PDF's in First Round, 52 in Second Round
- Research Chairs
 - Increase in NSERC Industrial Research Chairs
 - Campus Alberta Innovates Program (CAIP) Chairs
 - Canada Excellence Research Chair (CERC)
- New Faculty
 - 50 new Assistant Professors – Eyes High hires
- Grad Students
 - 60 new **Eyes High** Graduate Students

- Postdoctoral Scholars 2012-13: \approx **365**
- Postdoctoral Scholars 2013-14: \approx **445**
- Postdoctoral Scholars 2014-15: \approx **475**

Graduate Students

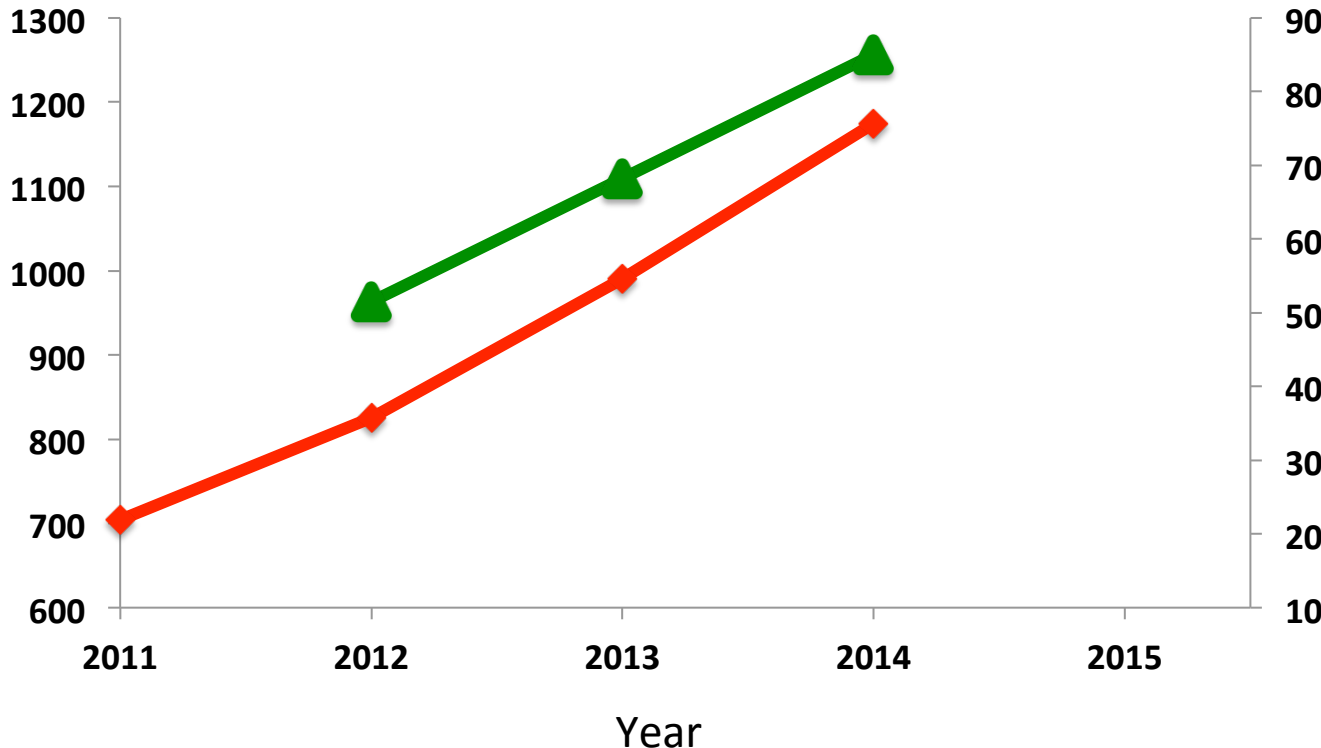


Source: University of Calgary graduate degrees awarded database (excludes certificate and diploma)

3. Create a Dynamic Environment for Excellence

- Ethics approvals
- Policies and procedures
- Research management systems

Agreements Executed



Revenue in \$M

Time for completion and approvals decreased by ~50% over same period

SUPPORT review and feedback

- Concept development supported by Research portfolio, involving partners across campus with domain-specific expertise
- **Interview with VPR**

Application
Development

- Multidisciplinary membership including junior and senior faculty members, AVPs, Campus Planning, Facilities, and Research Services
- Reviewers provide feedback on content and possible risks to the institution

- Applications approved by Campus Strategic Initiatives Group, and Executive Leadership Team – Operations
- Members provide input on risk analysis and ensure appropriate measures have been taken to minimize risks

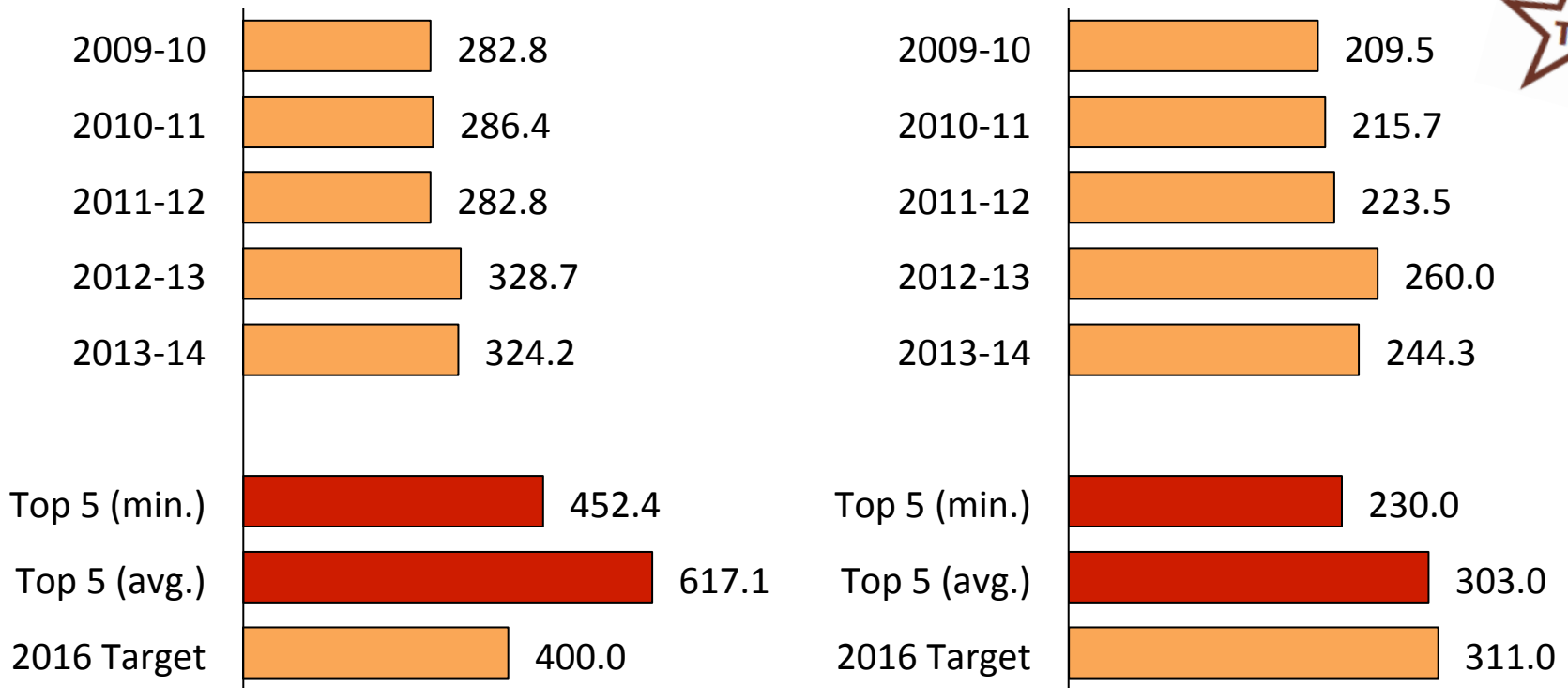
Institutional
Approval

Project Implementation

- Upon funding, project is implemented based on robust development and approvals process

Total (\$ Millions)

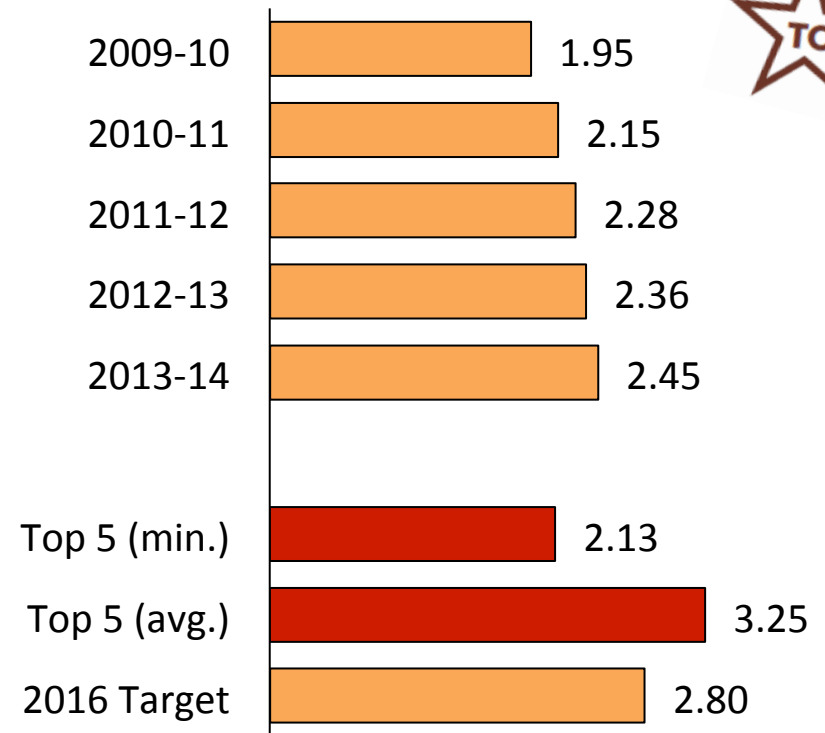
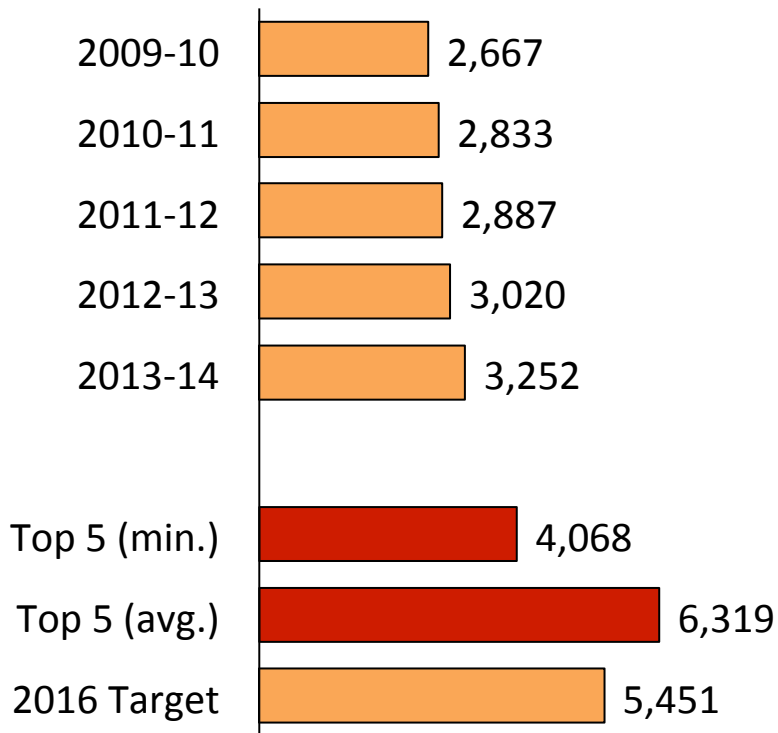
Per T&TT Faculty (\$ Thousands)



Source: Canadian Association of University Business Officials (CAUBO); faculty counts from Human Resources

Total

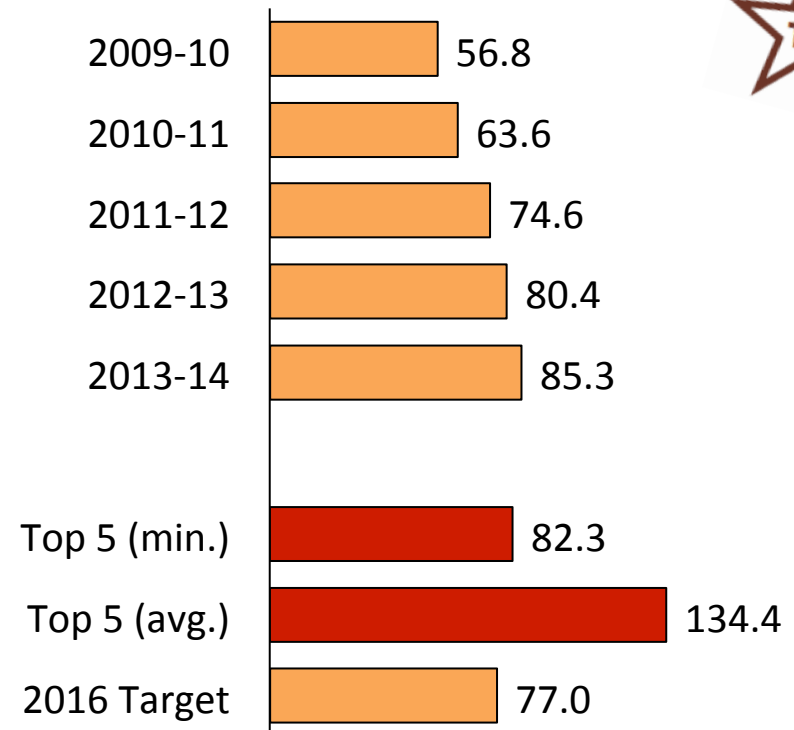
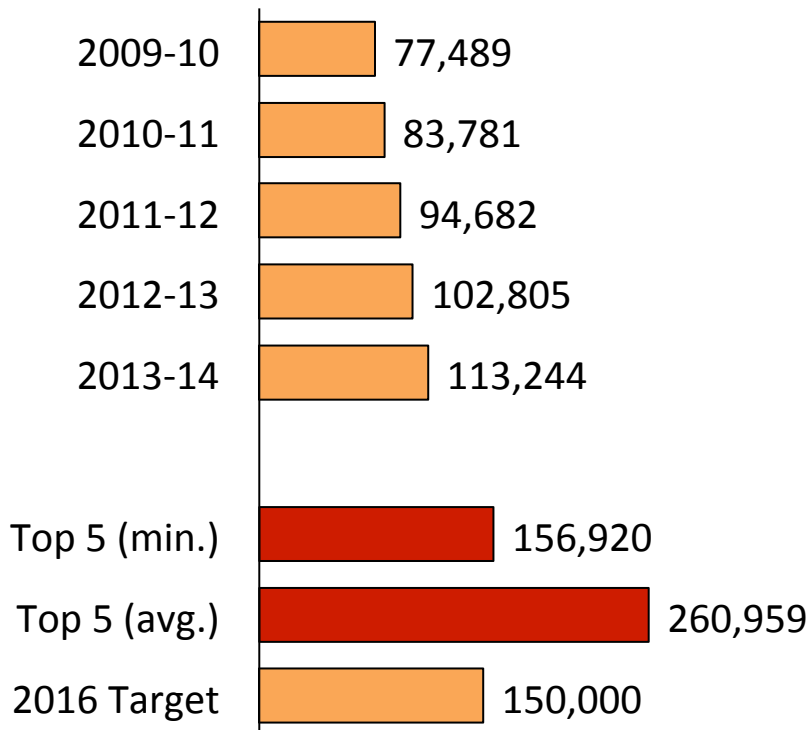
Per Tenure & Tenure Track Faculty



Source: Thomson Reuters – Individual year totals; faculty counts from Human Resources

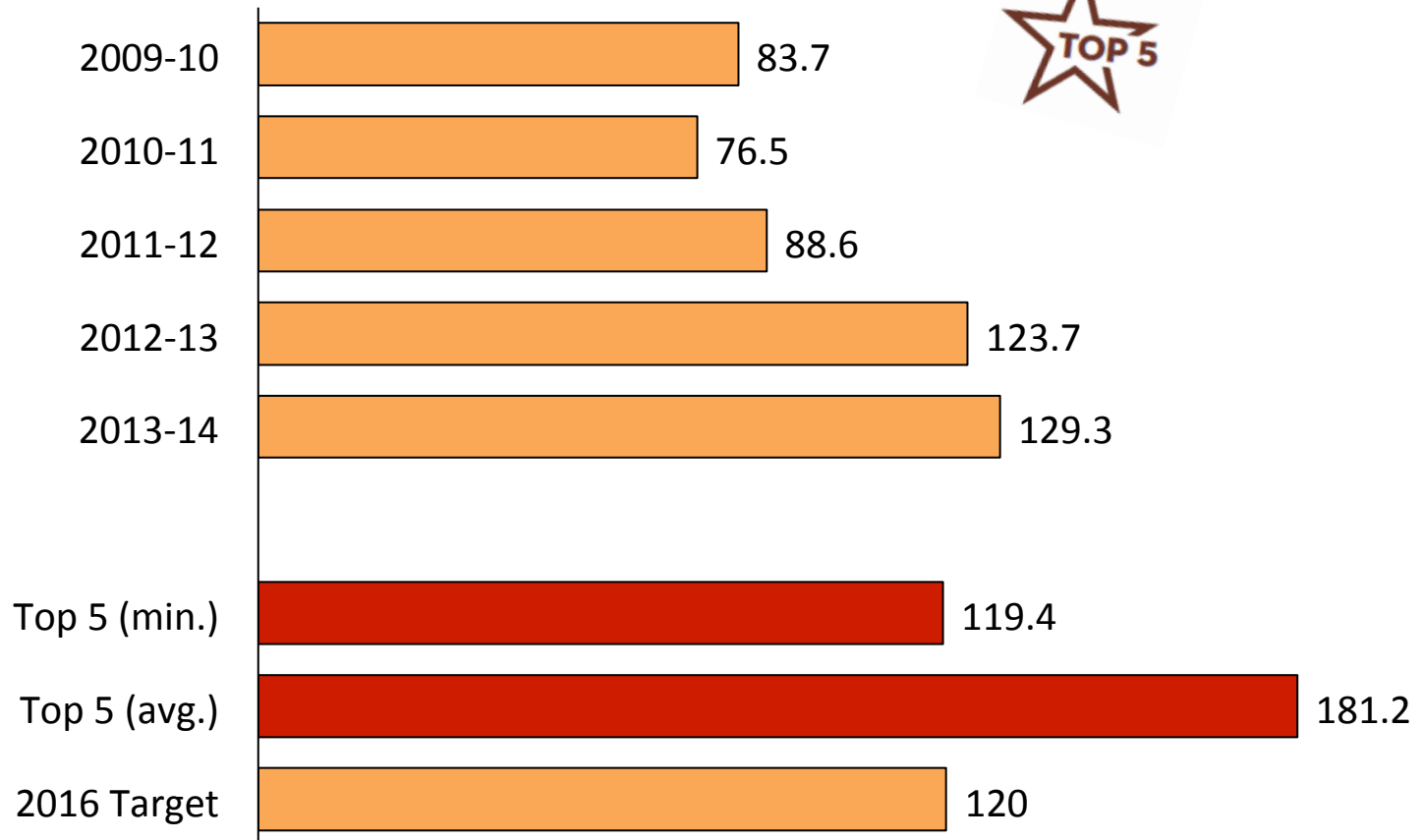
Total

Per Tenure & Tenure Track Faculty

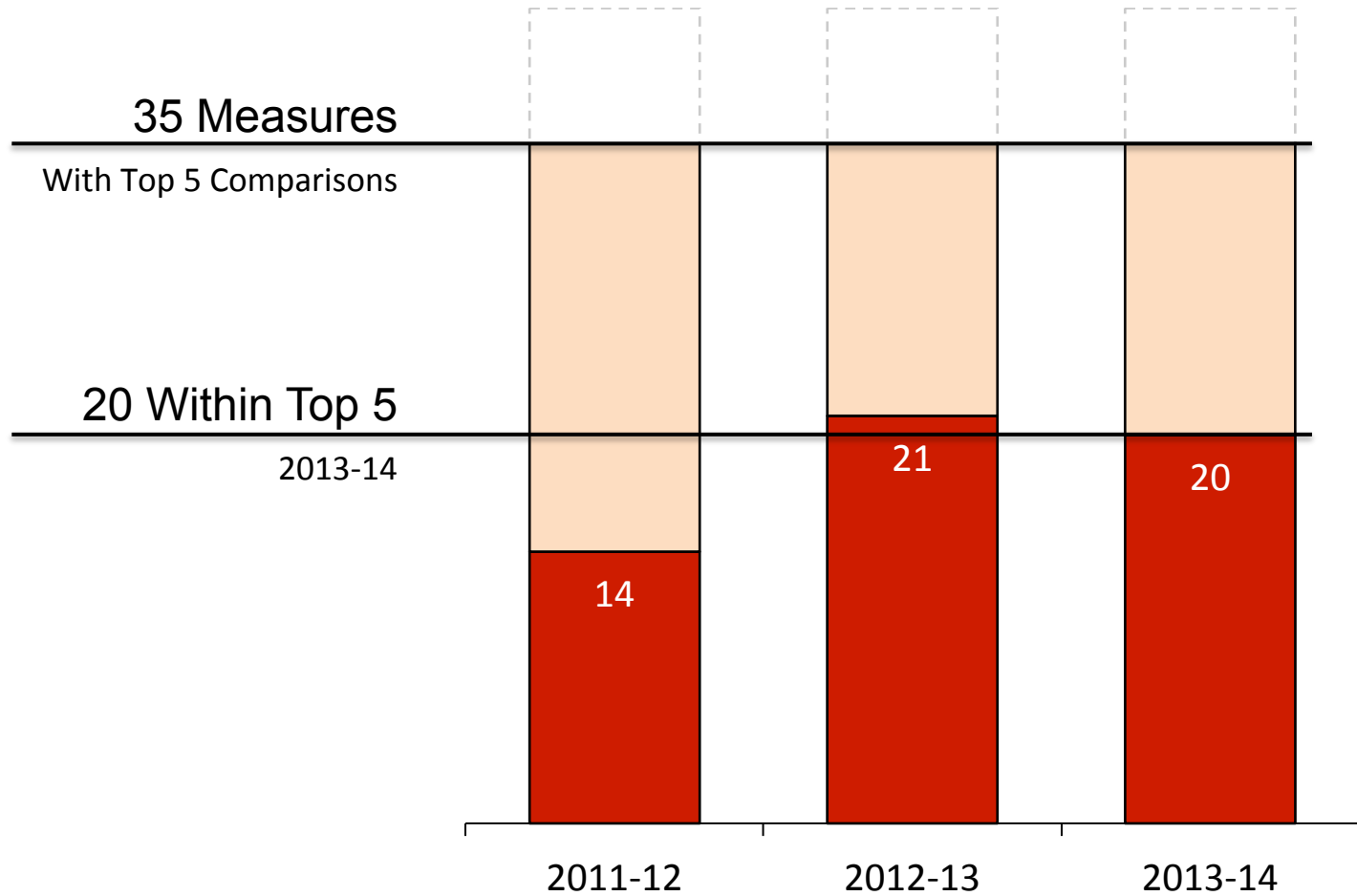


Source: Thomson Reuters – Five year totals; faculty counts from Human Resources

\$ Millions



Source: University of Calgary Development Office. Top 5 based only on UToronto, UBC, UAlberta (2012-13)



Key Learnings from our *Eyes High* Journey

- Process is a key for success – be creative
- Use your own talents
- Keep it simple and compelling
- Ensure differentiation
- Branding of the strategy is essential
- Link the strategy to decisions, allocations and roles
- Put the strategy into action
- Measure and report progress
- Continue to build organizational culture to support the strategy

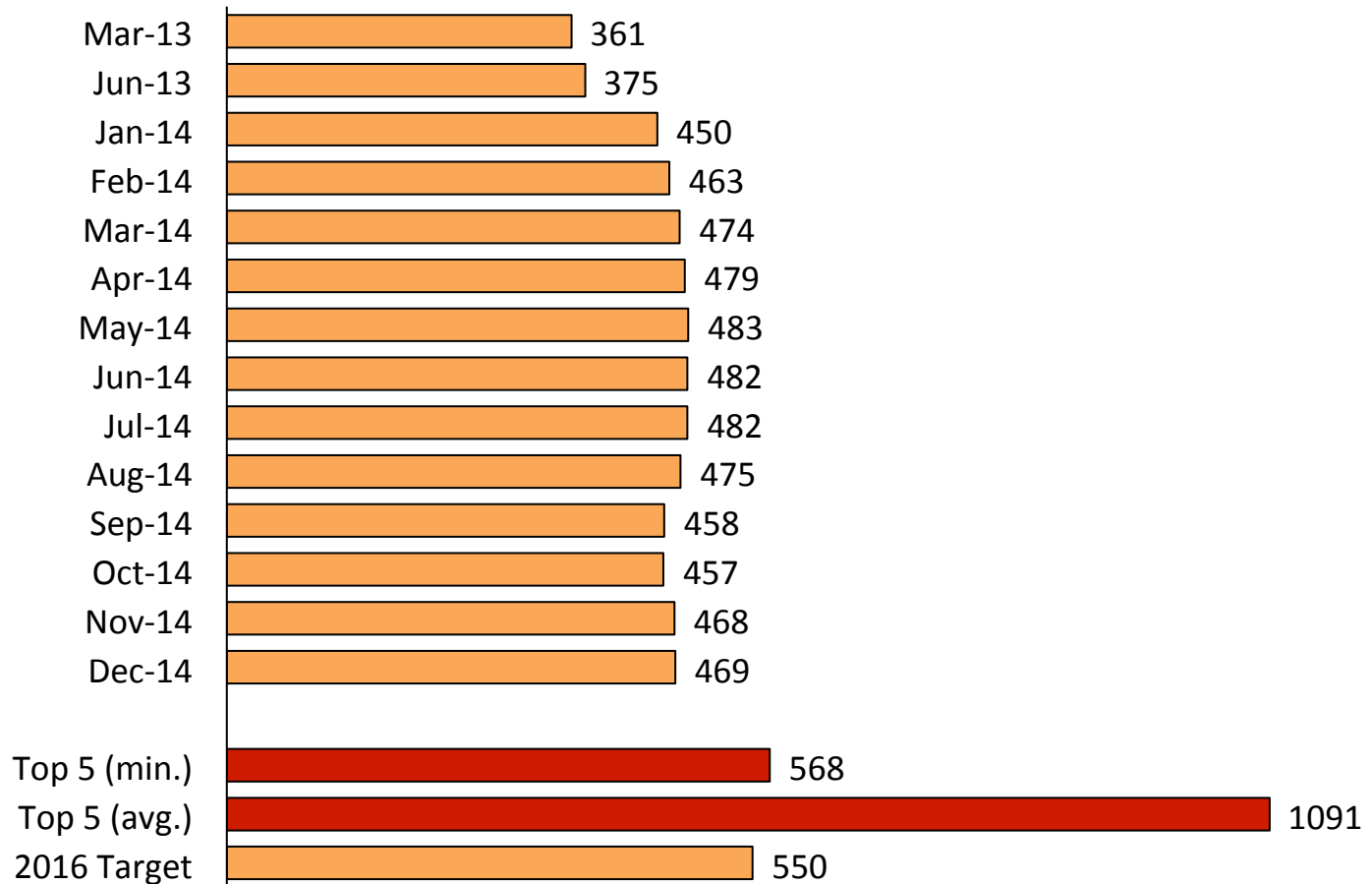
EYES HIGH



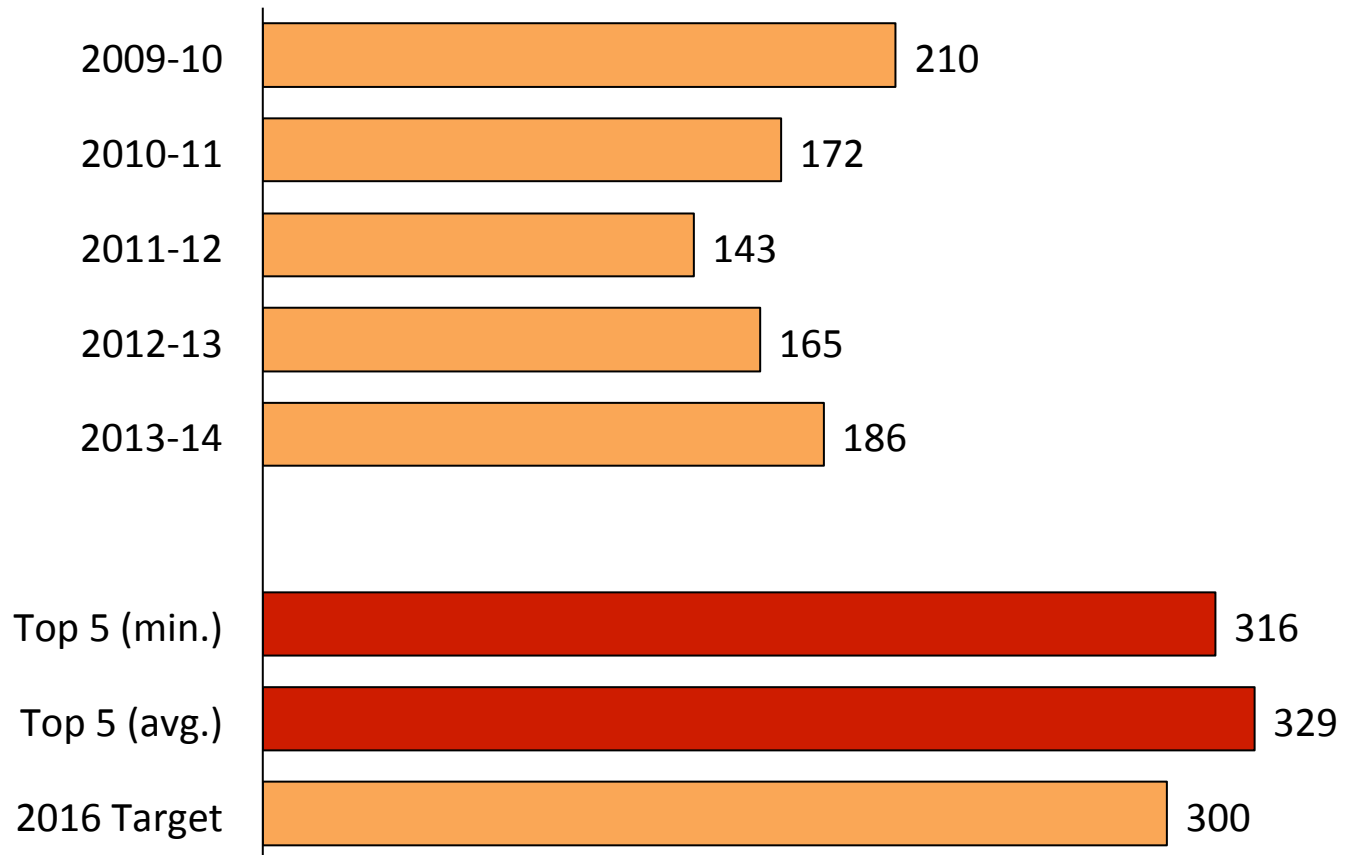


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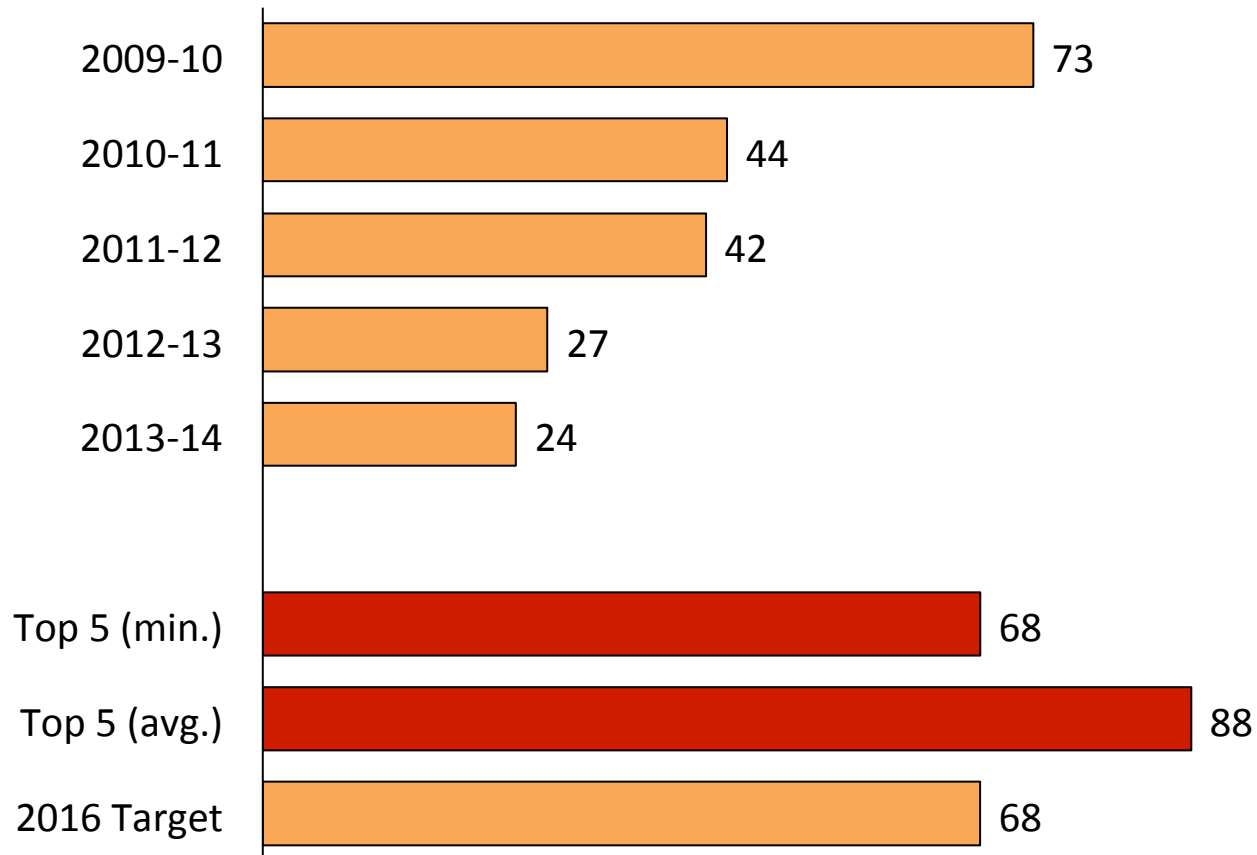
Postdoctoral Scholars



Source: University of Calgary postdoctoral scholars data

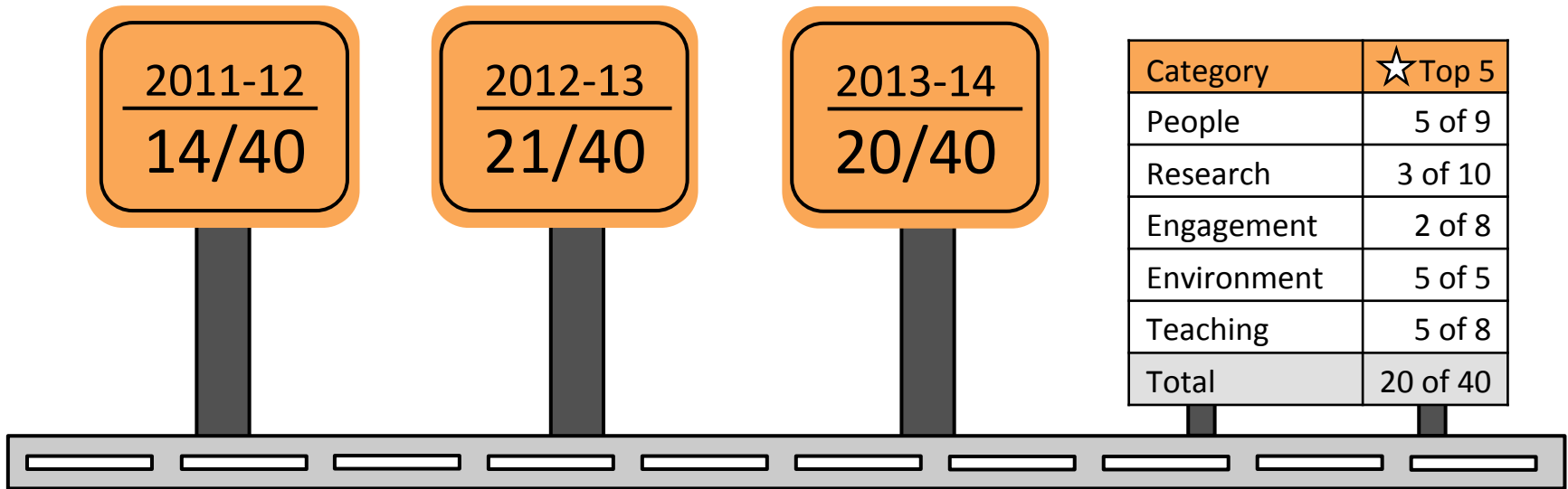


Source: Innovate Calgary, AUTM Survey (three-year running total)



Source: Innovate Calgary, AUTM Survey (three-year running total)

Top 5 Performance



Mitacs Programs: 2008-2014

