Research – Driving
• Student Success,
• Reputation and
• Revenue

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Overview
CU Boulder is a Research Intensive AAU Public
Office of The Vice Chancellor for Research (OVCR)

• The OVCR is the central point for support and advocacy for CU Boulder's world-class scholarship, creative work, and research.
• We provide the infrastructure and administrative support necessary to promote and sustain the excellence of the work of our highly productive faculty, research staff, and students.
• As proponents for research, we advocate for dependable research funding streams, dedicated resources, and strategic investments across the campus.
• In 2013-14, 2248 proposals worth $1.3B were processed by the Office of Contracts and Grants, and 1,880 award actions led to $412M in research funding.
• In 2014-2015, we are managing a portfolio that has reached $2.4B and around 5,200 projects
OVCR serves a very large community

• Undergraduates
  • 900 University Research Opportunity Program (UROP)
  • 800 Research Experience for Undergraduates (REU)
  • Honors theses, lab work…..
    • These experiences provide support network outside of class
    • Key to future of many of our students

• 2,295 full time graduate students
• 3,426 part time graduate students
• 840 Post Doctoral Researchers
• 1,129 T/TT faculty
• 2,323 Institute faculty and staff
  • 576 RA/SRA’s
  • 303 GRA’s
Local Federal Lab Partners

- National Institute of Standards and Technology (NIST)
- National Oceanic and Atmospheric Administration (NOAA)
- National Renewable Energy Lab (NREL)
- National Center for Atmospheric Research (NCAR/UCAR))
- United States Geological Survey (USGS)
- National Ecological Observation Network (NEON)
- National Solar Observatory (NSO)

CU-Boulder’s partnership with the National Institute of Standards and Technology (NIST) has led to four of its five Nobel Prizes.
Top Federal Funding Agencies

- Department of Commerce (20%)
- NASA (20%)
- National Science Foundation (20%)
- Health and Human Services (10%)
- Department of Defense (5%)
- U.S. Department of Energy (5%)

CU-Boulder is the No. 1 NASA-funded public university.
Agency Funding Levels

![Bar Chart: Agency Funding Levels 2009-2014]
Key Research Initiatives

- Aerospace Sciences and Engineering
- Biotechnology and Biosciences
- Renewable and Sustainable Energy
- Geosciences/Environmental Sciences
- Computational Science and Engineering
- STEM Education (Science, Technology, Engineering, Mathematics)
- Materials Science and Engineering
- GRAND CHALLENGE
National Role

• CU Boulder is a management partner, Alliance for Sustainable Energy, LLC that operates DOE’s National Renewable Energy Laboratory (NREL)

• CU Boulder is frequently approached regarding our interest in partnering in management and operation of national laboratories and centers.

• Also a regional hub for supercomputing

• National Snow and Ice Data Center (NSIDC) NSF

• National Coalition for Women and Information Technology (NCWIT) NSF
AND INTERNATIONAL MANAGEMENT ROLE

- Founding member of international alliance to manage and operate “Future Earth”, of the International Council of Scientific Unions.
  - consisting of 5 hubs: Colorado (USA), Canada, France, Japan and Sweden.

- Future Earth is a global research and education alliance addressing issues related to sustainability, environmental, energy, atmospheric, geoscience, natural and man-made hazards, rivers-lakes and oceans, and societal changes toward a better world.
Impacts of Research

Student Success
- Recruitment
- Performance
- Placement

Revenue
- 2,248 proposals ($1.3B)
- 1,880 awards ($412M)
- F&A/Indirect ($80M)

REPUTATION
Reputation
Reputation – World Class Scholarship

• Some of the awards that our faculty have earned include
  • 5 individual Nobel prizewinners (and share of 2007 IPPC Nobel Peace Prize)
  • 4 National Medal of Science winners
  • 8 MacArthur “Genius” Awards
  • 100 Fulbright Scholars
  • 5 Howard Hughes Medical Institute investigators
  • 14 Packard Fellows
  • 17 Guggenheim Fellowships
  • 24 Members of the National Academy of Science
  • 23 Members of the American Academy of Arts and Sciences
  • 22 Members of the National Academy of Engineering
Latest Rankings

• Academic Ranking of World Universities (Shanghai/Times of London/et al.) in 2014 CU Boulder placed no. 34 among 500 institutions (http://www.shanghairanking.com/ARWU2014.html)

• In 2014 the Leiden rankings of research universities placed CU Boulder at No. 15 (of 500 ranked institutions). (http://www.leidenranking.com/ranking/2014)

• 15 CU Boulder Graduate School specialty programs ranked in the top 50, 6 in the top ten in US News and World Report 2014 rankings of Best Graduate School

• 2010 (new rankings due) Mervis/Science ranking put us in top ten schools for the generation of research citations and in top 20 for generation of research output
Reputation – Research Integrity

- Regulatory Agencies
- The Press
- Law Enforcement
- Students
Reputation – Role of Office of Research Integrity

Faculty Review Committees
- **IRB**: 1400 human protocols
- **IACUC**: 141 animal protocols
- **COIC**: 2580 disclosures, 325 MOUs
- **SCRPCR**: Restricted Research
- **SCRM**: 2-3 misconduct cases/yr
- **IBC**: 88 biosafety protocols*
- **RSC**: Radiation Safety*

Administrative
- Export Controls
- Controlled Substances in Research
- Responsible Conduct of Research Education

* In collaboration with EH&S
Revenue
Proposals, Awards, and Expenditures at CU Boulder 2009-2014

- Proposals
- Awards
- Expenditures

<table>
<thead>
<tr>
<th>Year</th>
<th>Millions</th>
</tr>
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<tbody>
<tr>
<td>2009</td>
<td>$340</td>
</tr>
<tr>
<td>2010</td>
<td>$454</td>
</tr>
<tr>
<td>2011</td>
<td>$382</td>
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<td>$393</td>
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<td>2013</td>
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Revenue Management

• Want a world class research administration to match our world class research
  • Reorganization of Research Administration
    • Paperless
    • Lean Six Sigma
    • Enterprise level software
      • Improved metrics
      • Enter “once”
Revenue Diversification

• The research funding environment is changing – we are very competitive for federal awards but need to diversify
  • Industry
  • Non profits
• Looking for new model for Technology Transfer (TTO) and Office of Industry Collaboration (OIC)
  • How do we encourage entrepreneurship and manage risk?
  • EMX/UAE represent an opportunity to pioneer
Knowledge Mobilization

• Role goes beyond translational research
• How do we get our scholarship into the community?
  • Want to be seen as the “goto” campus
  • Want to make clear the value of investing in education and scholarship
Student Success
Student Success

- Students are very involved in the research and scholarly works on campus
Research Provides

- **Students**
  - Access to leaders in their fields
  - Opportunity to work in small groups and learn cutting edge skills
  - Possibility of financial support
- **Campus**
  - Worldwide recognition
- **Region**
  - Economic value
Impacts of Research

Students
- Recruitment
- Performance
- Placement

Faculty
- Recruitment
- Performance
- Retention

Economic Driver

Knowledge Mobilization

Scholarship

Office of Vice Chancellor for Research