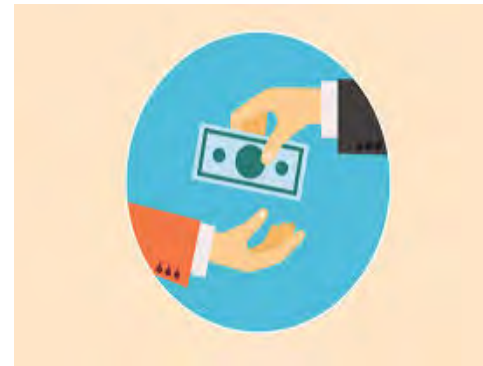
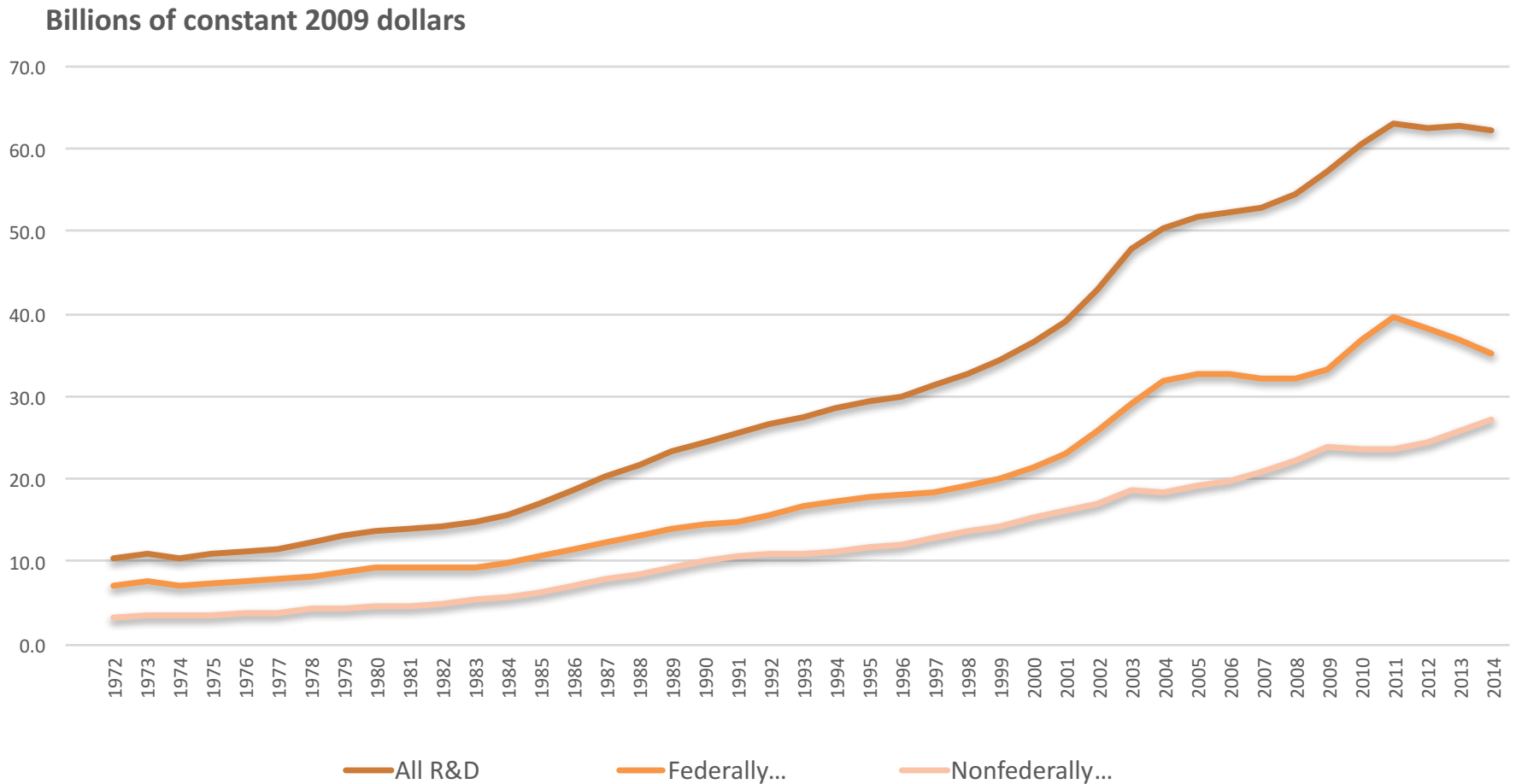


Funding Context and Opportunities for the Texas Water Research Network



Marilu Hastings
mhastings@cgmf.org
Texas Water Research Network Meeting
August 19, 2016

Federal Funding for Higher Education R&D is Declining



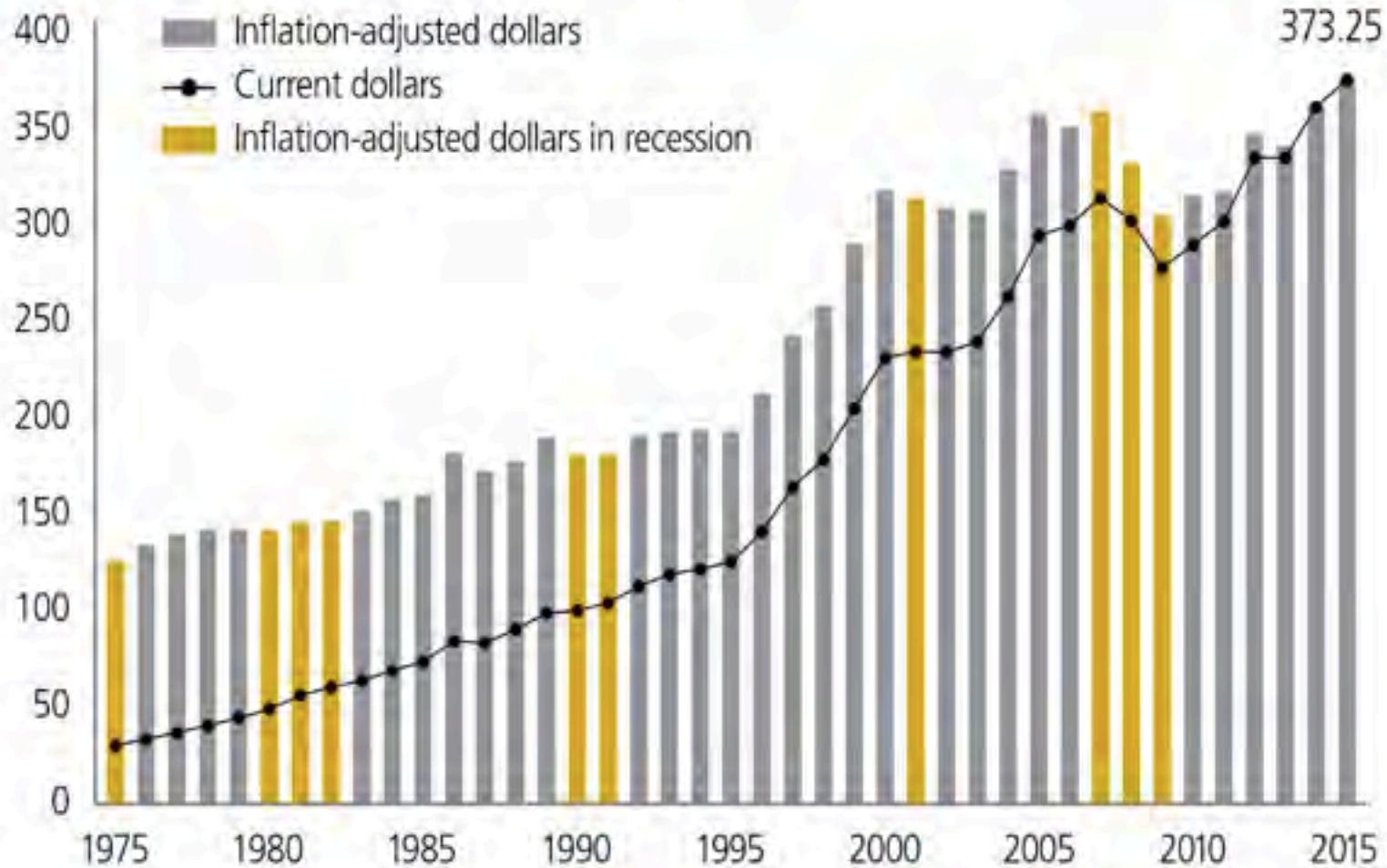
SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey. 2015

Thirty Institutions Reporting the Largest FY 2014 R&D Expenditures in All Fields

- 1 Johns Hopkins U.
- 2 U. Michigan, Ann Arbor
- 3 U. Washington, Seattle
- 4 U. Wisconsin, Madison
- 5 U. California, San Francisco
- 6 U. California, San Diego
- 7 Duke U.
- 8 U. North Carolina, Chapel Hill
- 9 Stanford U.
- 10 U. California, Los Angeles
- 11 Harvard U.
- 12 Massachusetts Institute of Technology
- 13 Columbia U. in the City of New York
- 15 U. Minnesota, Twin Cities
- 16 U. Pittsburgh, Pittsburgh
- 17 Texas A&M U., College Station and Health Science Center
- 18 U. Pennsylvania
- 19 Ohio State U.
- 20 Pennsylvania State U., University Park and Hershey Medical Center
- 21 U. Texas M. D. Anderson Cancer Center
- 22 Yale U.
- 23 U. California, Berkeley
- 24 Georgia Institute of Technology
- 25 U. California, Davis
- 26 U. Florida
- 27 U. Southern California
- 28 Vanderbilt U.
- 29 Washington U., Saint Louis
- 30 Northwestern U.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey. 2015

Total giving, 1975–2015 (in billions of dollars)

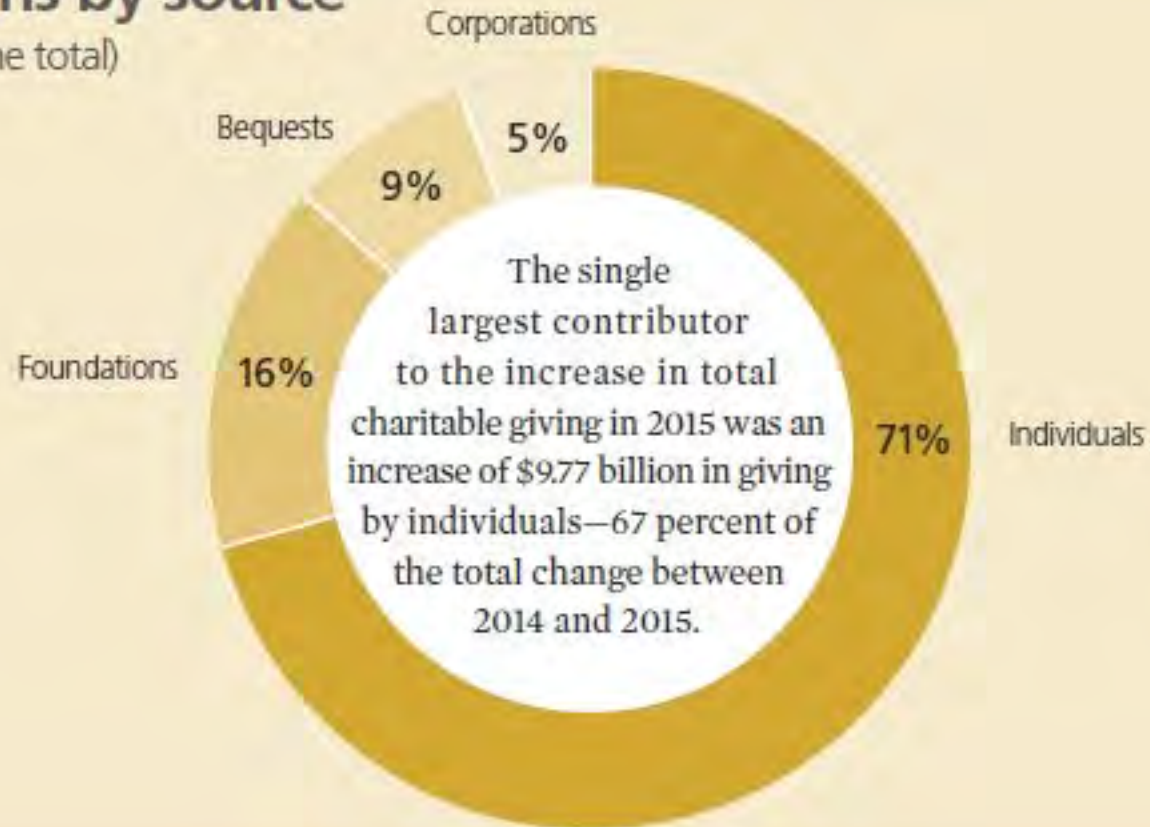


SOURCE: Giving USA Foundation | *GIVING USA 2016*

Total 2015 contributions: **\$373.25 billion**

Contributions by source

(by percentage of the total)



'Pasteur's Quadrant' Model of Scientific Research

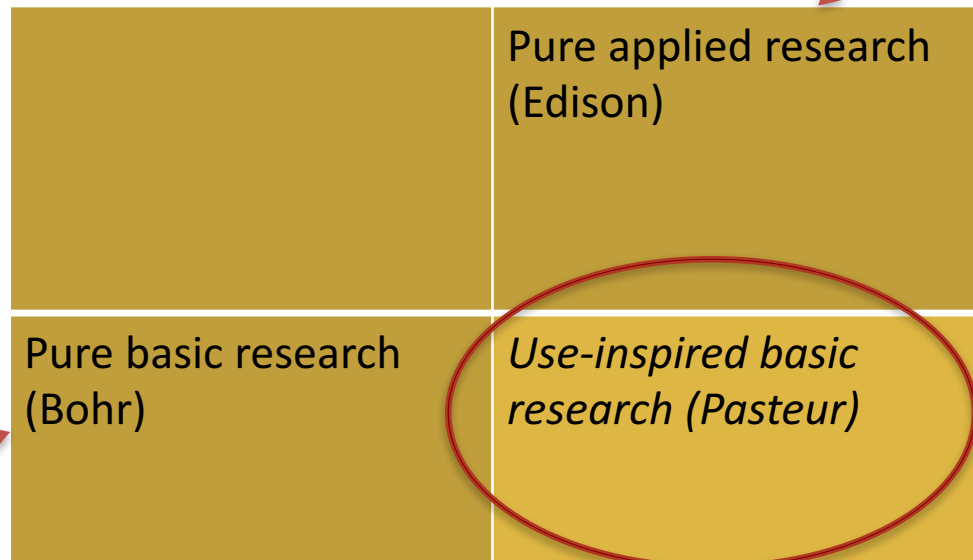
Research inspired by...

Considerations of use?

Corporations, VC,
Breakthrough Energy
Coalition

Quest for fundamental
understanding?

Kavli, Sloan, Simons, Moore
Foundations



Mitchell, Packard, Arnold, Gates,
Rockefeller Foundations

Reject the “Pipeline” Model of Knowledge Transfer



Design research program and systems to:

- Conduct *intentional research* to solve defined problems
- Promote *collaborative production* of trusted knowledge
- Engage *stakeholders and end-users* in its creation
- Attract funding sources by:
 - Identifying individual philanthropists
 - Solving problems in Pasteur’s Quadrant that improve human and environmental well-being
 - Defining a mission-driven research agenda