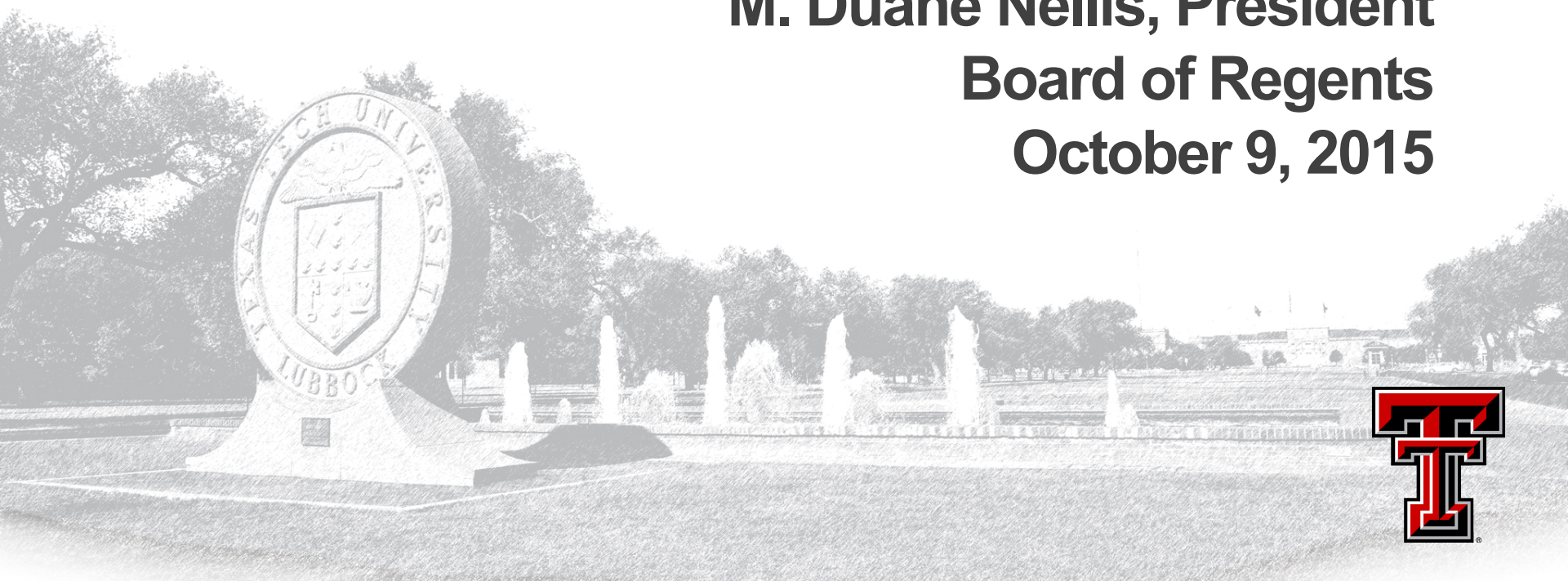
Texas Tech: Transforming Education and Scholarship through Innovation as a National Research University

M. Duane Nellis, President

Board of Regents

October 9, 2015



Core Strategies

- Enhanced faculty support and strategic hiring
- Additional catalysts for positive faculty success and research growth
- Catalysts for faculty recognition and dialogue
- Enhanced facility development and utilization
- Expanded economic prosperity and innovation

Promote Faculty Success & Increase National Prominence

Enhanced Faculty Support and Strategic Hiring

- **University cluster initiative**
  - ✓ Six new faculty hires starting in FY2015 have been credited with more than $5.5 million in new proposals
- **Over 300 new faculty members in last three years**
- **Hiring 31 new research professors linked to current institutional research cluster success**
- **Presidents' Collaborative Initiative**
- **Creating discretionary funds for highly successful competitively funded faculty**
- **Developing incentive salaries for competitively funded research faculty**

Promote Faculty Success & Increase National Prominence

Enhanced Faculty Support

- Hiring grant proposal writers for colleges that would work with faculty on budget development and proposal writing to facilitate greater proposal submissions (with college matching funds)
- Examining faculty workload issues to identify needs/barriers to increased external funding proposals as it relates to ease of pre and post award processes

Promote Faculty Success & Increase National Prominence

Additional Catalysts for Positive Faculty Success and Research Growth

Facilitating multidisciplinary and multi-institutional collaborations, strategic research advancement

- ✓ Institutional collaboration with federal labs and industry
- ✓ Facilitating large-scale proposal development
- ✓ Swift Critique Appraisal & Notation (SCAN) Session
- ✓ Where appropriate, working with consultants for major proposal preparation/advocacy
- ✓ Scholarship catalyst programs in the social sciences and humanities including creation of Humanities Center
- ✓ Early investigator faculty proposal development workshops

Promote Faculty Success & Increase National Prominence

Catalysts for Recognition and Dialogue

- **Targeted External Faculty Awards Program**
  - ✓ Increases recognition of distinguished faculty, and national and international visibility of TTU
- **Faculty Research Club**
  - ✓ Provides a social setting to stimulate interdisciplinary research collaborations

Improve Research Infrastructure

Enhanced Facility Development and Utilization

- Experimental Science Building I fully utilized
- Experimental Science Building II under development
- Innovation Hub at the Research Park open
- East Loop Research Building
- Reese Technology Center

Improve Research Infrastructure

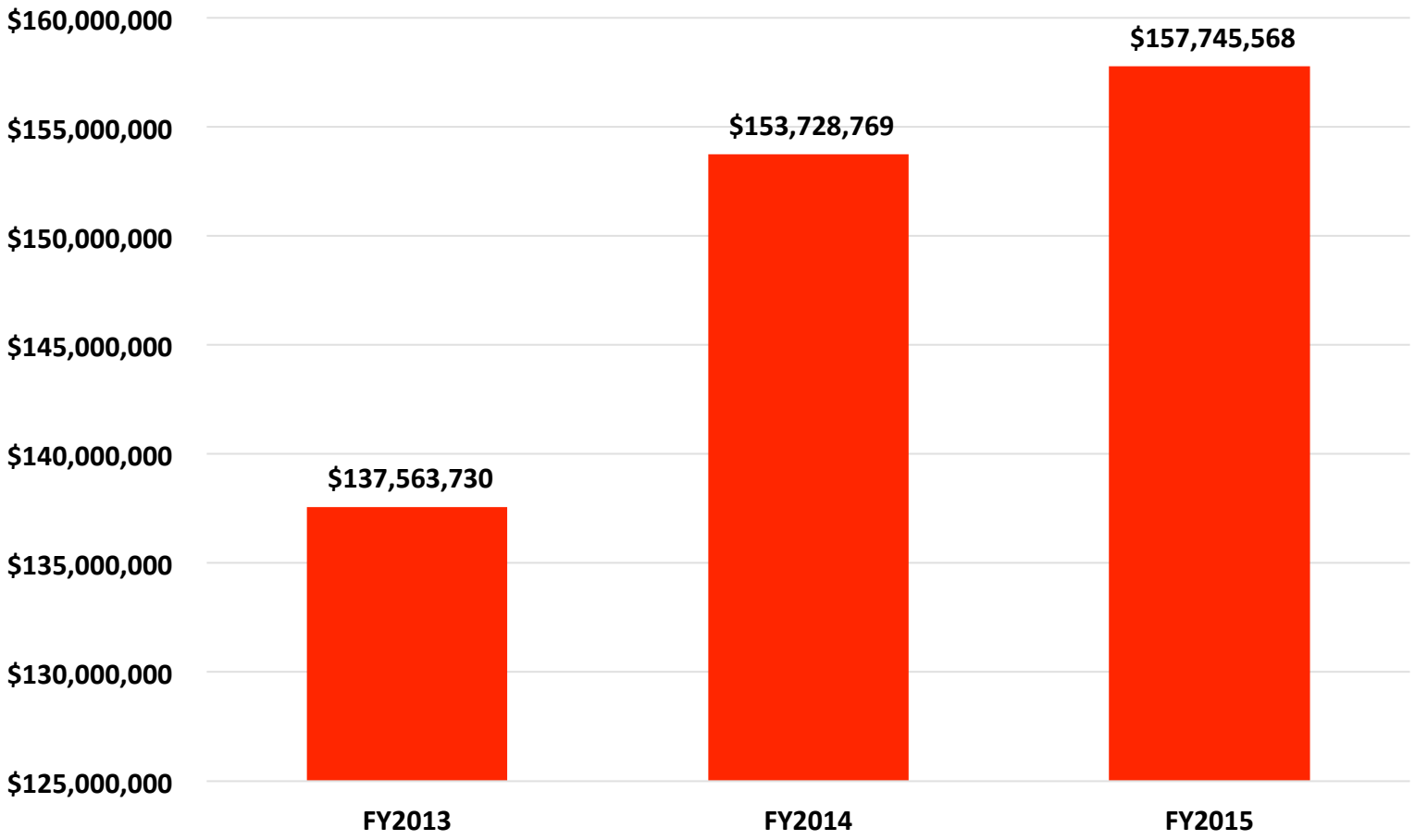
- **Renovations for designated research space along the Engineering Key are underway**
- **Renovate existing creative scholarship space**
- **Shared Core Facility**
  - ✓ Cutting-edge research requires expensive instrumentation
  - ✓ About $70 million in instrumentation on campus currently
  - ✓ Plans for more effective core equipment utilization

Expand Economic Prosperity and Innovation

Innovation and Economic Engagement

- **Innovation and Economic Prosperity University Designation**
- **NSF I-Corps Node with UT, A&M and Rice**
- **Entrepreneurial Cluster**
  - ✓ Director, Translational Research & Entrepreneurship
  - ✓ Director, Innovation Hub and Research Park
  - ✓ Director, Office of Research Commercialization
- **Lubbock Angel Network and other investors**
- **New entrepreneurship classes taught in multiple areas including business, engineering and music**

Total Research Expenditures



Federal Funding Landscape

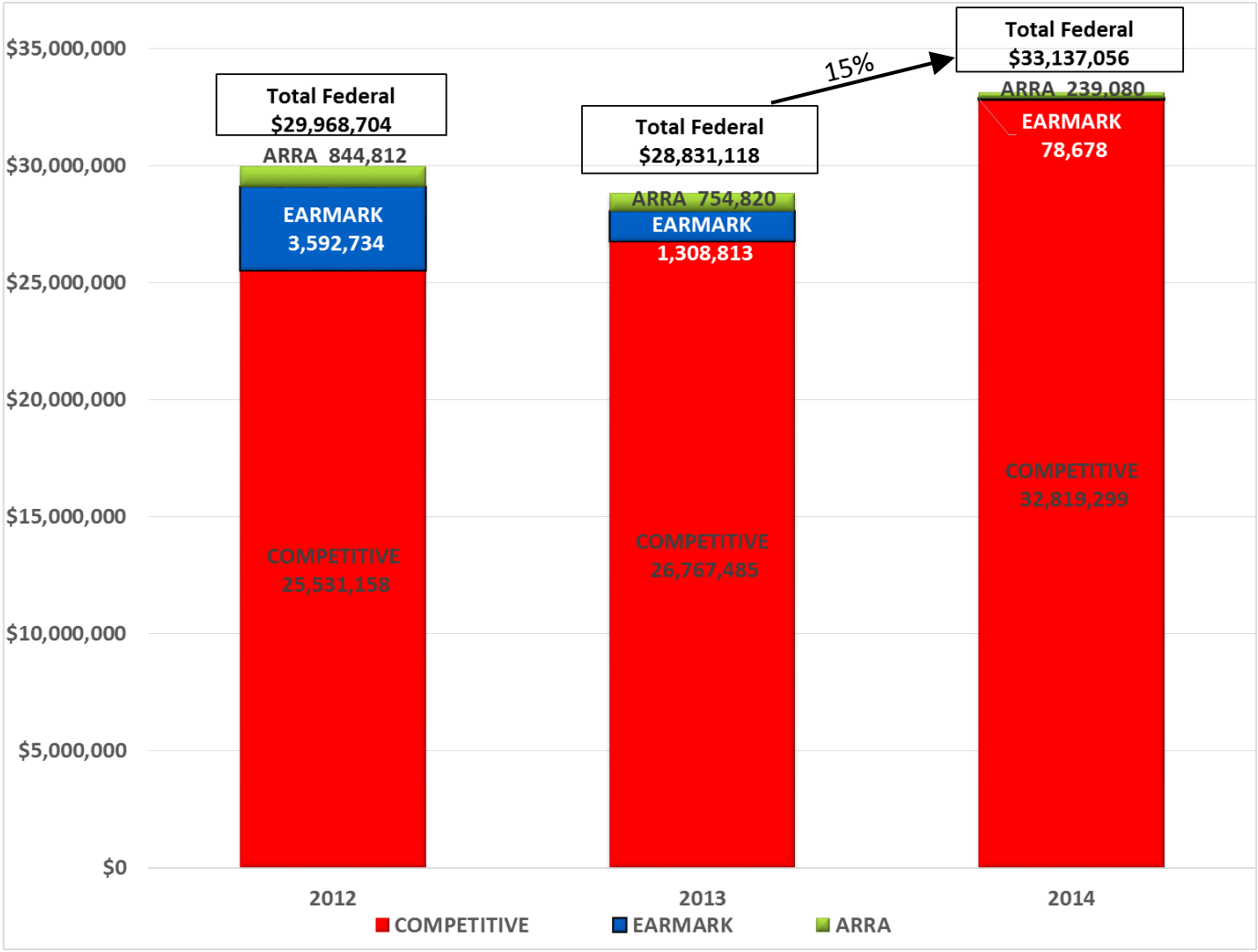
- Federal agency funding is flat nationally
- Texas Tech's competitive federal research funding increased by 15% from FY2013-FY2015
- Federal agencies are primarily funding multi-investigator/multi-institution proposals

Federal Appropriations Strategy

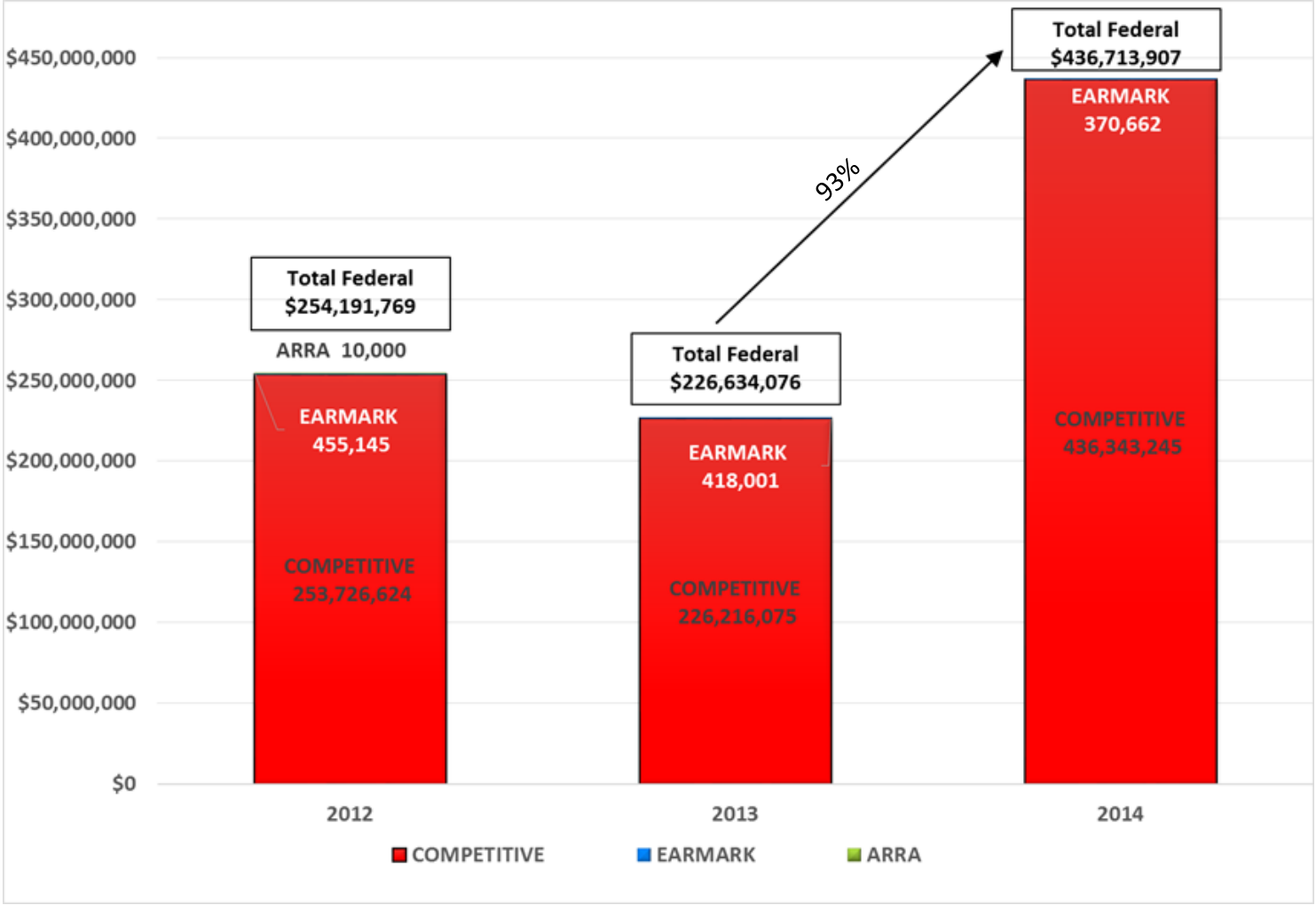
Strategically coupling TTU's research strengths with current national priorities

- **New federal appropriations requests process**
  - ✓ Input from deans on their areas of national prominence
  - ✓ Compare with opportunities & priorities of Texas delegation
  - ✓ Develop requests and communications materials
  - ✓ Linking lead faculty to D.C.

Federal Research Expenditures: Our competitive federal research is expanding rapidly



Federal Research Proposals = Sustainable Growth



Commercialization

TTU System

Fiscal Year	2011	2012	2013	2014	2015
Invention Disclosures	56	76	83	96	102
U.S. Patent Application s Filed	22	26	35	73	65
License/ Option Agreements Signed	2	6	10	15	14
Gross Rev from Licensing	$269 K	$207 K	$438 K	$520 K	$679,562

TTU

Fiscal Year	2011	2012	2013	2014	2015
Invention Disclosures	32	52	57.5	47	49
U.S. Patent Applications Filed	*	*	*	36	29
License/ Option Agreements Signed	*	*	*	8	9
Gross Rev from Licensing	$263 K	$181 K	$358 K	$463 K	$526,307

* Since the Office of Research Commercialization was previously at the System level, older records are not broken out by institution prior to 2014.

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