

The Road to Carnegie R1 Classification

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June 7, 2018

Why does a “R1” Research University designation matter?

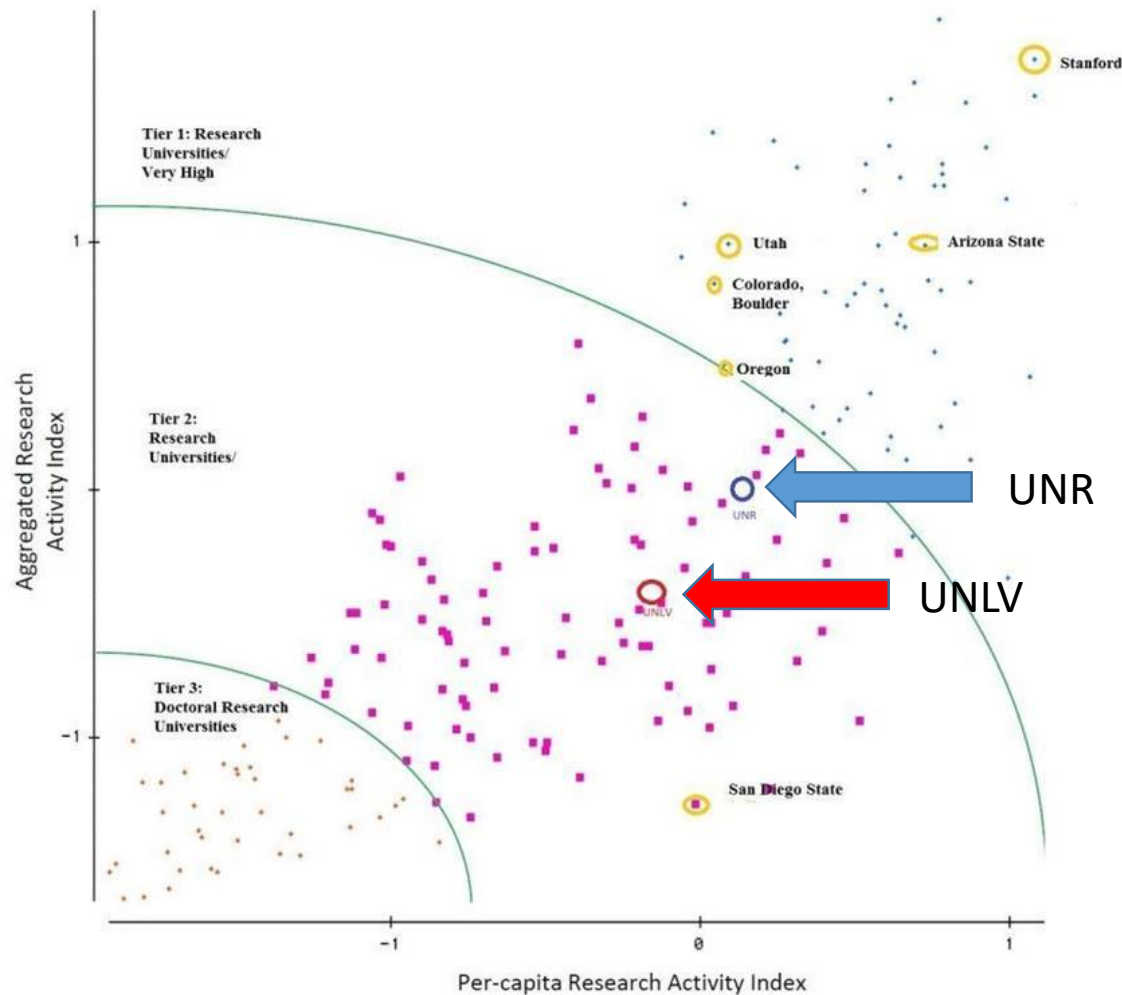
- Enhance opportunities to contribute to state economic development
- Recruitment of outstanding graduate and undergraduate students
- Recruitment and retention of outstanding faculty
- Reputation among peers and within state
- Credibility with funding agencies
- Prestige with employers

Carnegie “Correlates”

- PhDs
 - Humanities
 - Social Sciences
 - STEM
 - Other Professional
- Non-Faculty PhD Research Staff and Postdocs
- Research Expenditures
 - Science & Engineering (S&E)
 - Non S&E

How is a university designated “R1”?

2010 Classification



Who determines Carnegie research classification?

- Indiana University
- Last reclassification in 2015
 - 115 R1
 - 107 R2
 - 115 Moderate
- Next assessment in December 2018
- More frequent assessments going forward

Where are we now and how far do have to go?

- Different histories
- Different capacities, needs
- Different plans
- Common goal



University of Nevada, Reno



The Need for Additional Faculty in PhD Programs

	Utah	New Mexico	UNR
Total faculty	992	894	540
Faculty in PhD programs	853	737	316
% in PhD Programs	86%	82%	59%

Comparison with New Mexico: PhD production

Faculty Needed	
UNM PhD/Faculty	UNR PhD/Faculty
317	252

Progress Since FY14

Staff

- 158 additional tenure-track faculty hires
 - ~100 more needed
- 135 additional PhD students
 - **~65 more needed**
- 46 additional research personnel

New PhD Programs

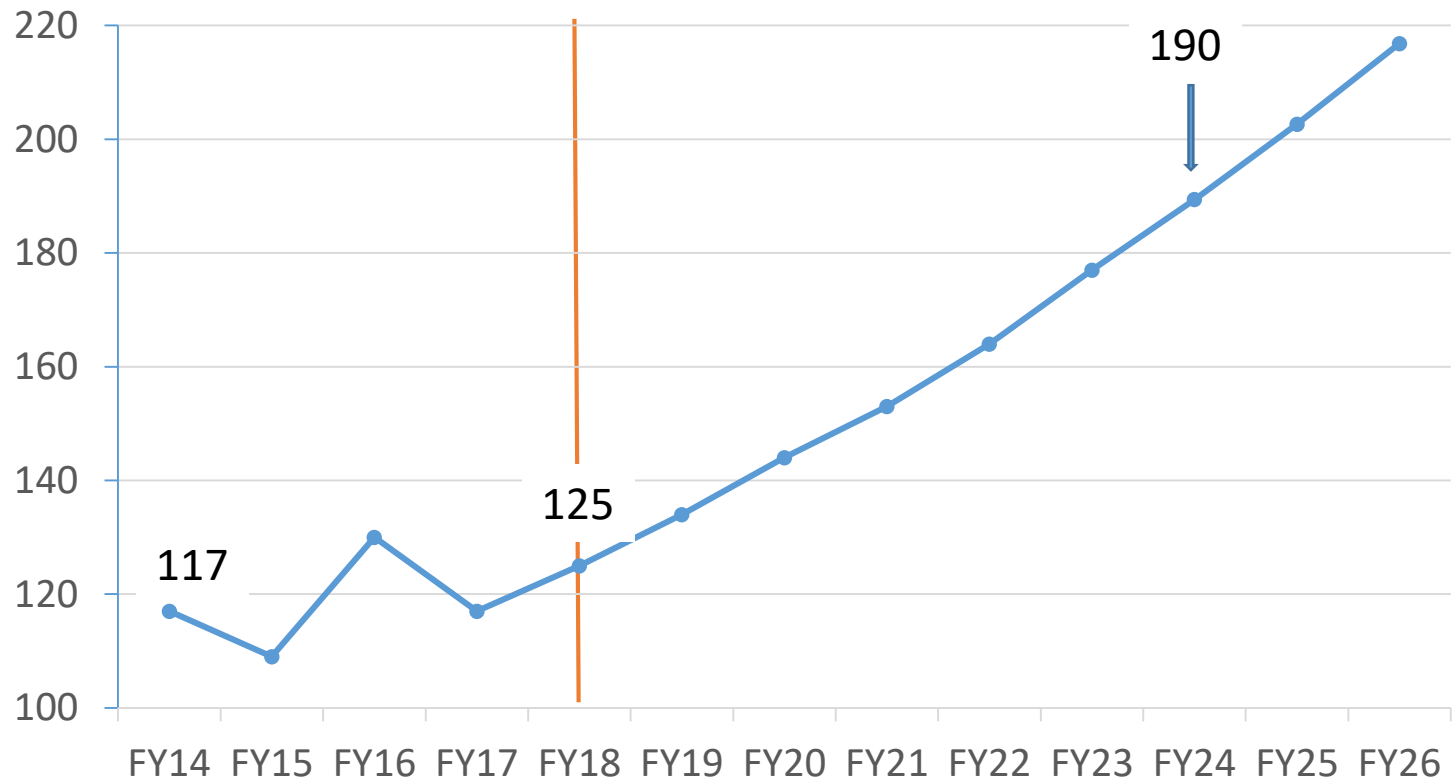
- Animal and Rangeland Science
 - Integrative Neuroscience
 - Mathematics
 - Statistics and Data Science
 - Business Administration
-
- Coming: Musical Arts, Engineering Education, Communication Studies, Journalism

Progress Since FY14

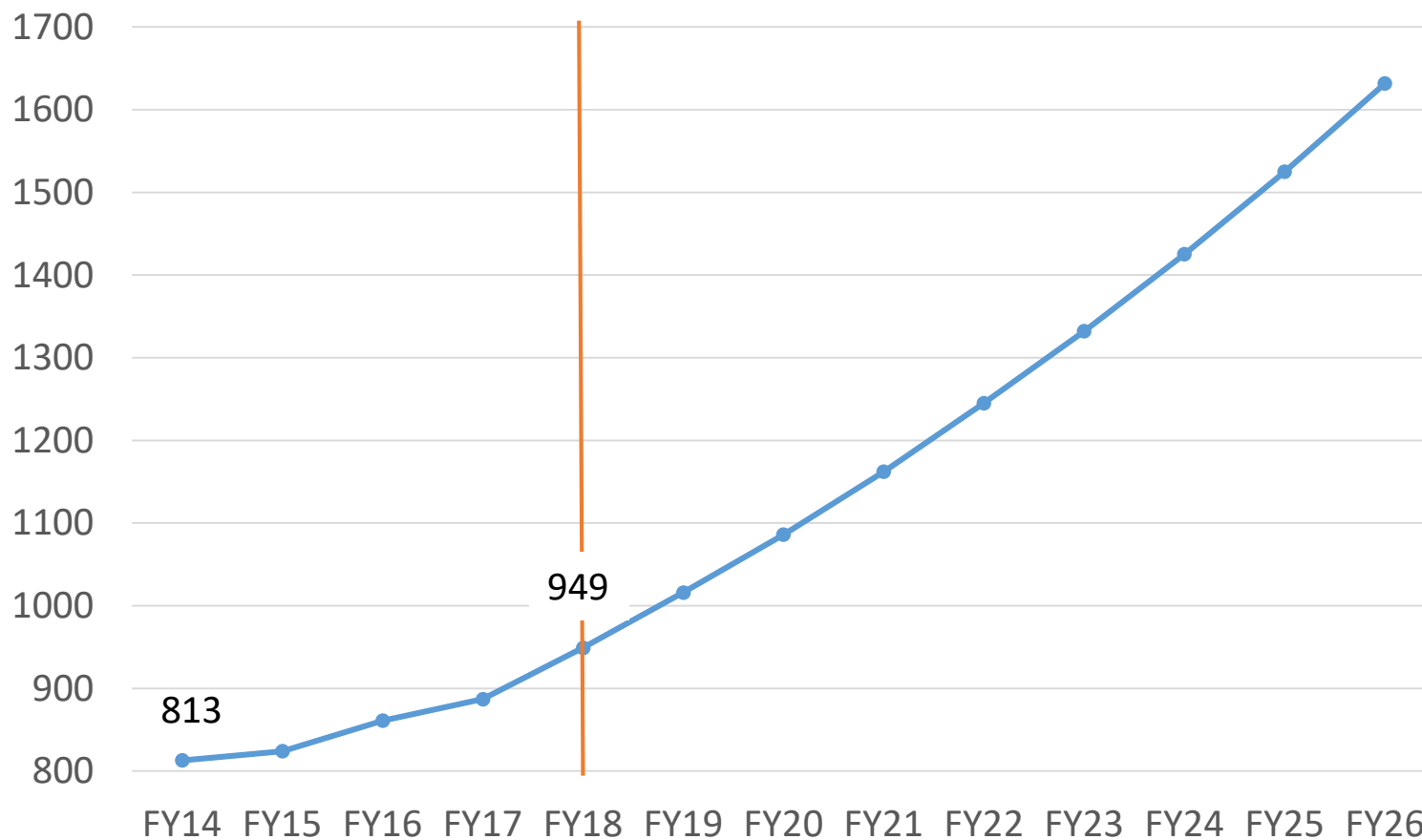
Space

- Renovated: Thompson, Lincoln, Palmer Engineering
- Forthcoming
 - New Engineering Complex
 - Renovations to: Valley Road Life Sciences, Chemistry, Physics, Mack Social Sciences
 - College of Business Complex
 - Life Sciences Complex

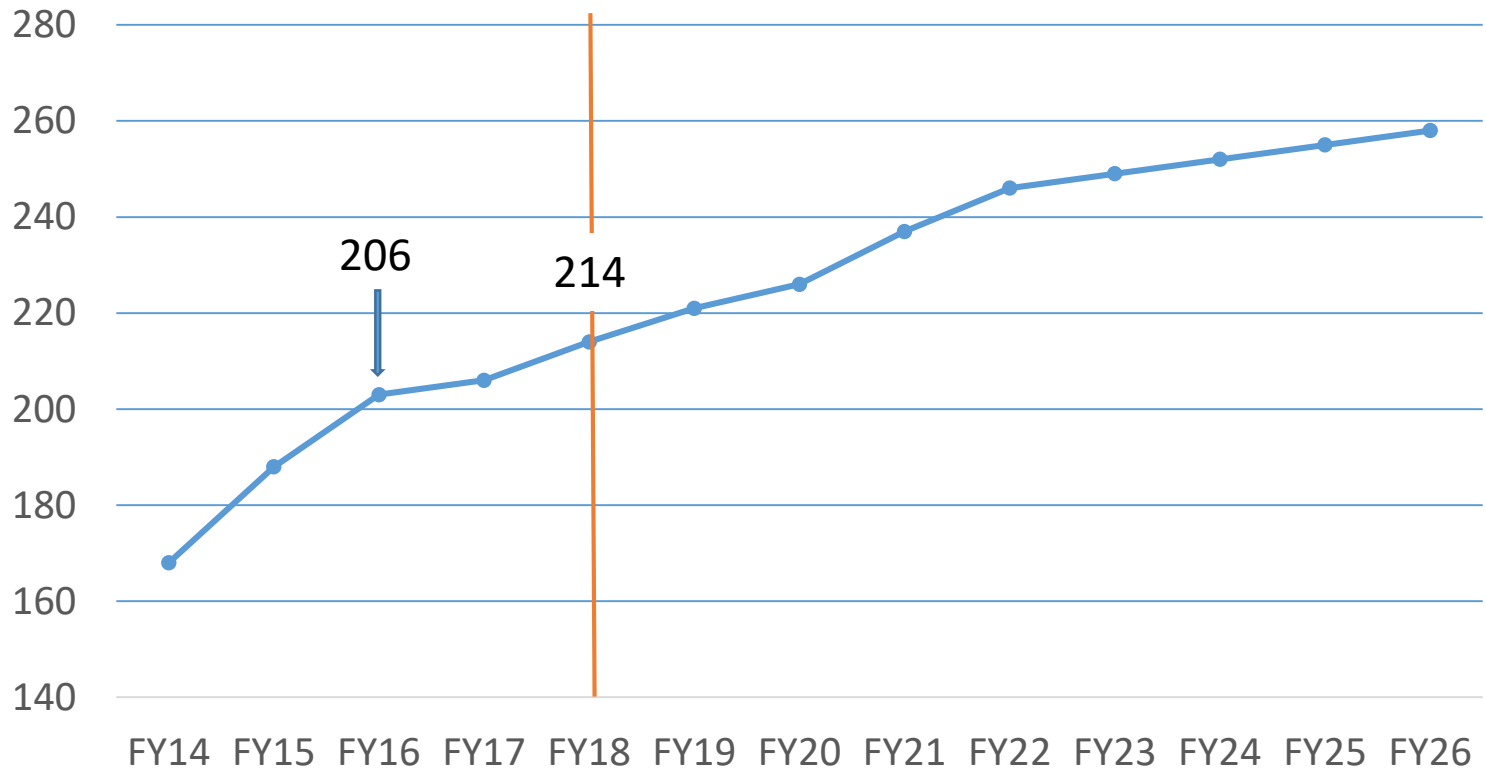
Doctoral Graduates



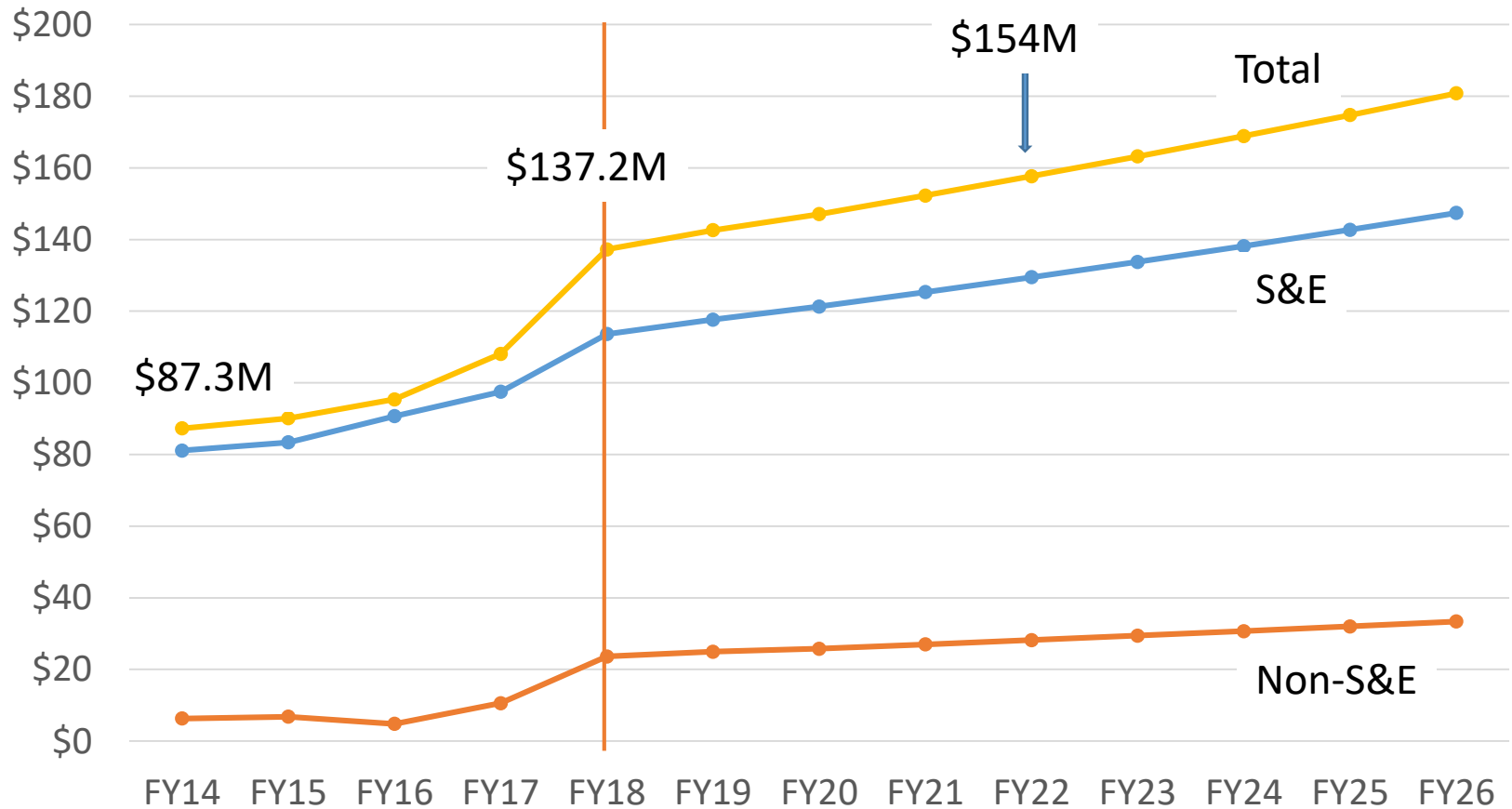
Doctoral Enrollment



Research Personnel



Research Expenditures



Advanced Manufacturing Proposal (\$11M)

\$10M:

- 40 new faculty lines
- 50 new graduate research lines
- 10 new research-support lines
- 10 new staff-support lines

\$1M:

- Equipment & lab renovations

Projected Budgetary Needs to Meet R1 Goals

		\$/Position	Total Cost
Faculty	100	\$110,500	\$11,050,000
Startup	100	\$300,000	\$30,000,000
GA	70	\$28,517	\$1,996,190
Professional	25	\$107,900	\$2,697,500
Classified	25	\$65,000	\$1,625,000

Budget Projection: No Advanced Manufacturing or Fee Increase (\$M)

		FY20	FY21	FY22	FY23	FY24	FY25	
Faculty	16.7/yr	\$1.84	\$1.88	\$1.92	\$1.95	\$1.99	\$2.03	
Startup		\$1.67	\$1.12	\$2.75	\$2.70	\$2.66	\$2.61	
GA	10.8/yr	\$0.31	\$0.32	\$0.32	\$0.33	\$0.33	\$0.34	
Professional	4.2/yr	\$0.45	\$0.46	\$0.47	\$0.48	\$0.49	\$0.50	
Classified	4.2/yr	\$0.27	\$0.28	\$0.28	\$0.29	\$0.29	\$0.30	
	TOTAL	\$4.56	\$4.07	\$5.76	\$5.77	\$5.79	\$5.81	
	Adv. Man	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Reg. Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	Total
	+/-	-\$4.56	-\$4.06	-\$5.73	-\$5.73	-\$5.73	-\$5.73	-\$31.52

Budget Projection:

Advanced Manufacturing, 4% Annual Fee Increase, 2% Annual Enrollment Growth (\$M)

		FY20	FY21	FY22	FY23	FY24	FY25	
Faculty	25/25/12.5...	\$2.76	\$2.76	\$1.38	\$1.38	\$1.38	\$1.38	
Startup		\$2.50	\$1.52	\$4.73	\$3.48	\$2.23	\$2.23	
GA	25/25/5...	\$0.71	\$0.71	\$0.14	\$0.14	\$0.14	\$0.14	
Professional	6.25/6.25/3...	\$0.67	\$0.67	\$0.34	\$0.34	\$0.34	\$0.34	
Classified	6.25/6.25/3...	\$0.41	\$0.41	\$0.20	\$0.20	\$0.20	\$0.20	
	TOTAL	\$7.06	\$6.08	\$6.79	\$5.54	\$4.29	\$4.29	
	Adv. Man	\$5.00	\$5.00	\$0.00	\$0.00	\$0.00	\$0.00	
	Reg. Fees	\$2.49	\$2.64	\$2.80	\$2.97	\$3.15	\$3.34	Total
	+/-	\$0.43	\$1.56	-\$3.99	-\$2.57	-\$1.14	-\$0.95	-\$6.67

Budget Projection: Summary of Scenarios (\$M)

Enrollment	Adv. Man.	Fee Inc.	FY20	FY21	FY22	FY23	FY24	FY26	Total
0	No	None	-\$4.5	-\$4.1	-\$5.7	-\$5.7	-\$5.7	-\$5.7	-\$31.5
0	Yes	None	\$0.4	\$0.9	-\$5.7	-\$5.7	-\$5.7	-\$5.7	-\$21.5
0	No	FY20-26	-\$2.1	-\$1.5	-\$3.1	-\$3.0	-\$2.9	-\$2.8	-\$15.4
2%	Yes	FY20-26	\$0.4	\$1.6	-\$4.0	-\$2.6	-\$1.1	-\$1.0	-\$6.7

Summary

- Counting faculty salaries toward research expenditures contributes significantly to research-expenditure goals.
- Most significant challenge is meeting goals of doctoral graduates.
- Additional research and office space is a critical need.
- With addition of Advanced Manufacturing funds, ongoing fee increases, and modest enrollment growth, R1 goals attainable in 4-5 years.



UNLV

Progress on Achieving R1 Status

How are Carnegie R1 Institutions Determined

- Based on how an institution **ranks** in several categories
 - Doctoral Degrees (split into humanities, social science, STEM, other)
 - Post Doctorate and Research Staff with Doctorate Degrees
 - Research Expenditures (split into science and engineering, and non S & E)
- Rankings are split into two factors
 - The sum of the rankings of all of the raw numbers of above metrics
 - The sum of the rankings of expenditures and post doctorate and research staff per faculty member
- Normalized Euclidian distance of those two factors determines classification



UNLV's Target Metrics for Achieving R1 Status

METRIC	UNLV TARGET	DATA SOURCE
Doctoral Degrees	<i>200 degrees</i>	Integrated Postsecondary Education Data System (IPEDS)
Faculty Counts	<i>900 tenured and tenure track faculty</i>	Integrated Postsecondary Education Data System (IPEDS)
Research & Development Expenditures	<i>\$150 million</i>	NSF Survey of Research and Development Expenditures at Universities and Colleges
Research Staff	<i>120</i>	NSF Survey of Graduate Students and Postdoctorates in Science and Engineering

200
Doctoral
Degrees

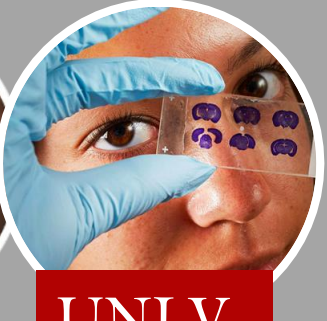
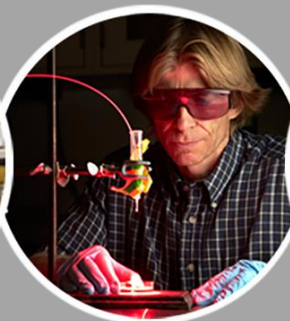
900
T/TT
Faculty

\$150 M
Research
Expenditures

120
Research
Staff

Steps Taken Towards R1 Status

- Hired permanent Vice President for Research and Economic Development
- Increased hiring of new research-intensive faculty
- Increased qualification requirements for Office of Sponsored Programs' staff
- Increased graduate student funding and fellowships in grant applications
- Launched successful Office of Undergraduate Research



Steps Taken Towards R1 Status

- Launched Clinical Trials Office to support School of Medicine research
- Enhanced Export Control policies and procedures
- 114 research disclosures, 43 patent applications filed, and 38 revenue / license agreements executed totaling nearly \$300,000
- Assessing research building assignments and utilization; priorities given to research intensive faculty and graduate student education



Activities in Progress Towards R1

- Health for Nevada Initiative

- Devoted first year to Health Disparities Research Initiative using UNLV funds
- Interdisciplinary, cluster-hiring of research-intensive faculty
- Have hired two junior faculty and currently conducting search for director, junior faculty and senior faculty

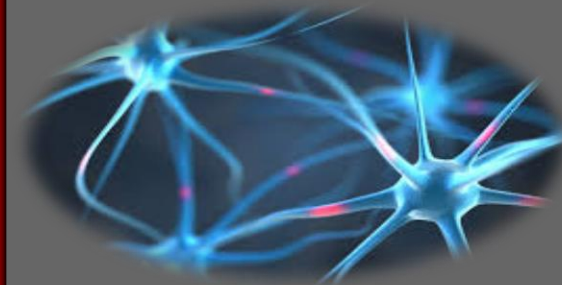
- Development of new Research Excellence Program

- Opening Fall 2018
- Available to students, faculty, and staff
- Services provided in:
 - Workshops and classes on writing grants and contracts
 - Research methods
 - Data and statistical services
 - Peer review and expert review of grants and contracts



Focused Areas for Excellence in Faculty Recruitment

- Sports Research and Innovation
 - University-industry research partnerships
 - Las Vegas as sports and entertainment capital
- Neuroscience
 - Federal funding for the BRAIN Initiative and COBRE funding
 - Partnership with Lou Ruvo Center
- Radiological Chemistry
 - Collaboration with Los Alamos National Laboratory
 - University-industry partnership



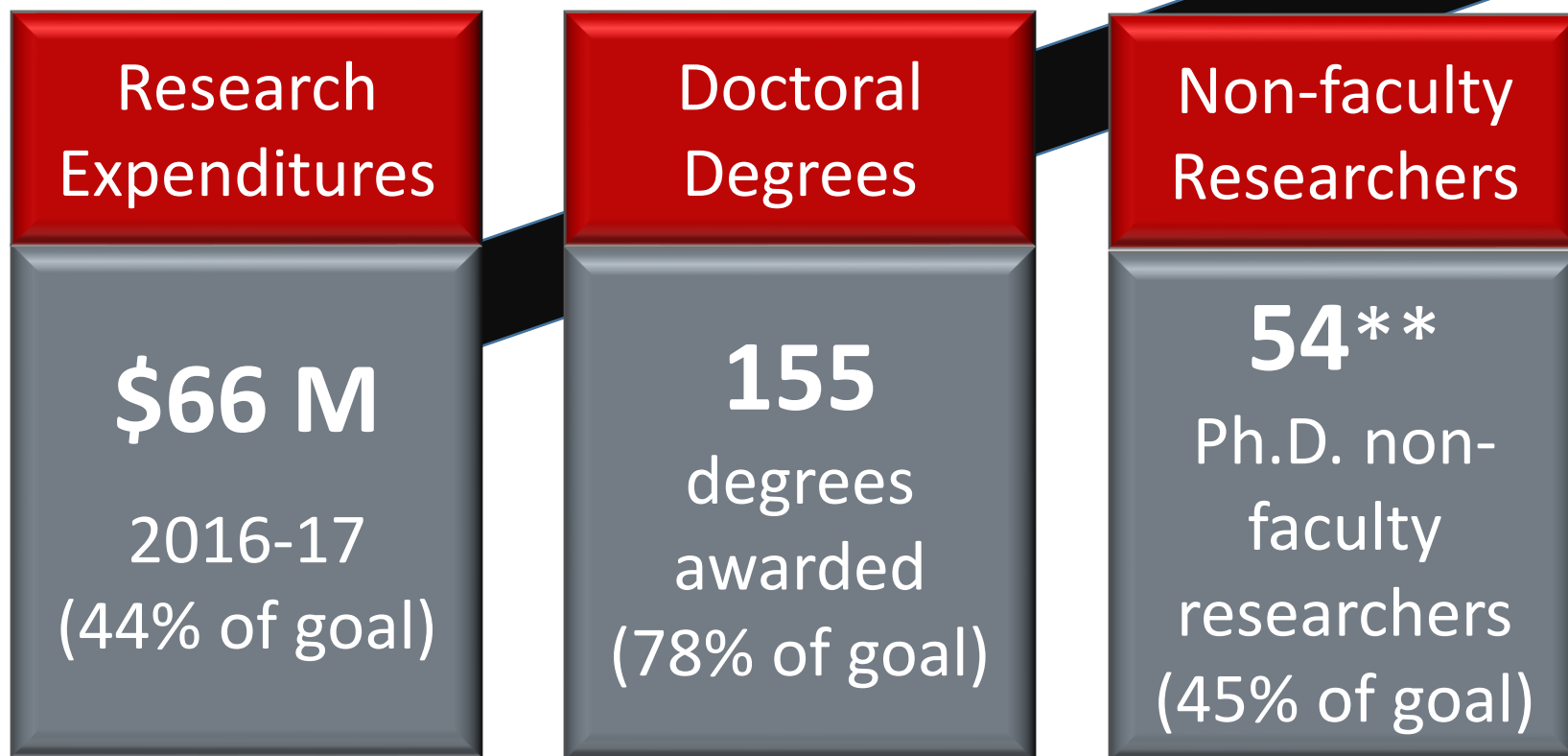
What is Needed

- Research Intensive Faculty
 - Salary
 - Research buyouts
- Research Infrastructure
 - Space
 - Support Systems (Workday)
 - Administrative & Lab Support Staff
- Leadership Continuity
- Enhanced State Operational Support
 - Start up funds
 - Instrumentation and Equipment Service
 - Enhanced Capital Funds



UNLV's Path to Achieving R1 Status*

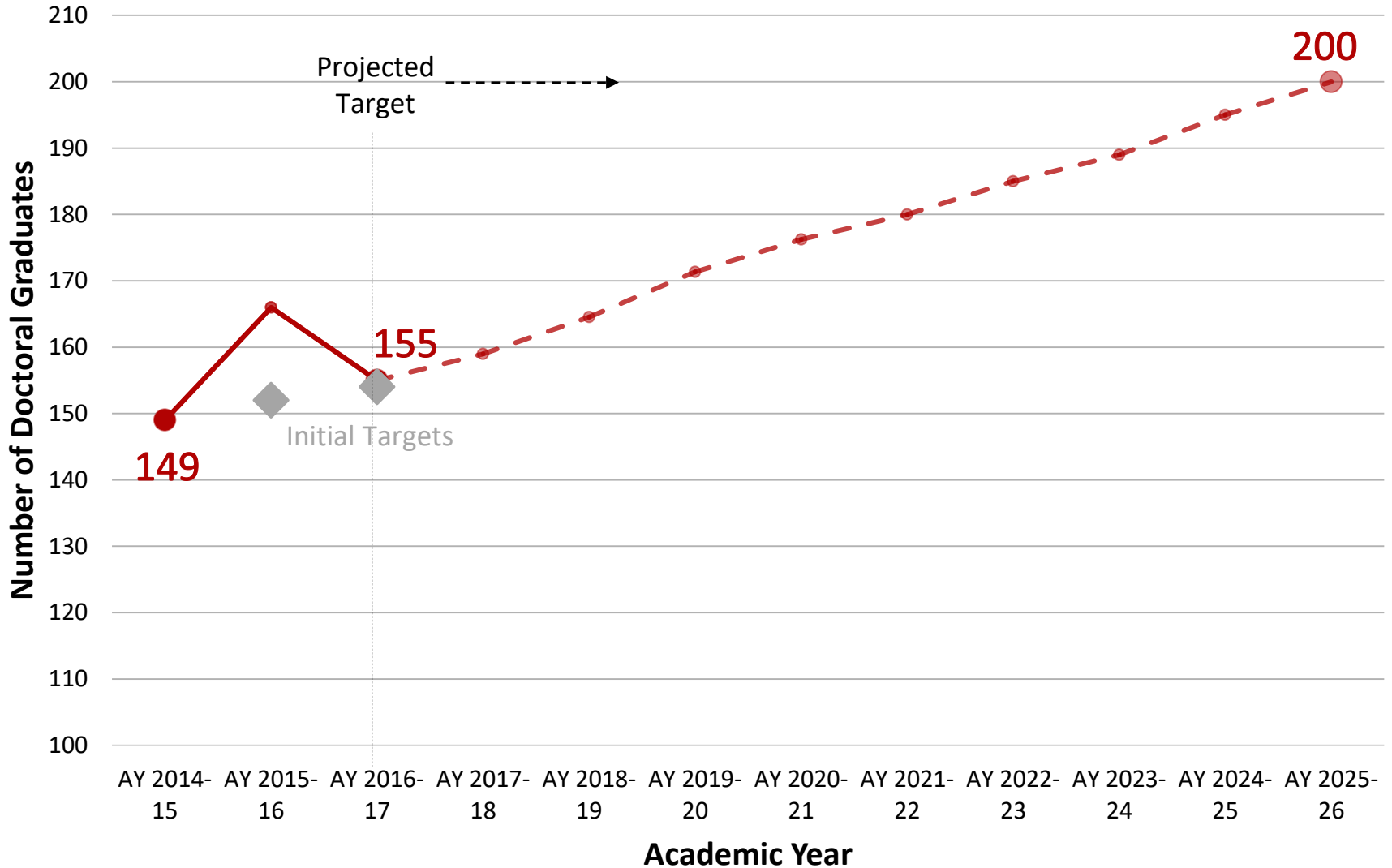
Accomplishments To Date



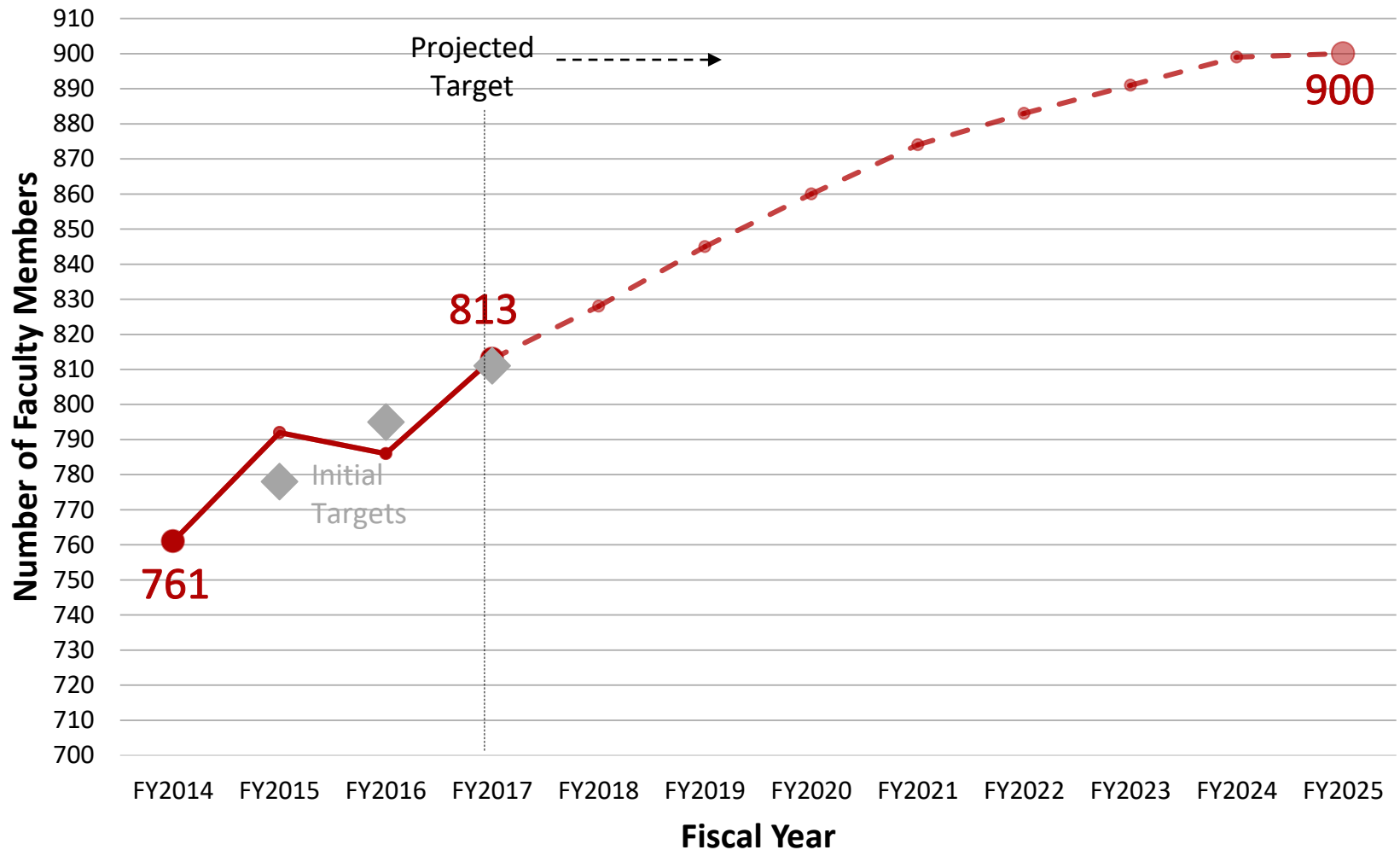
*Goals set in 2014

**Change in personnel titles in Workday

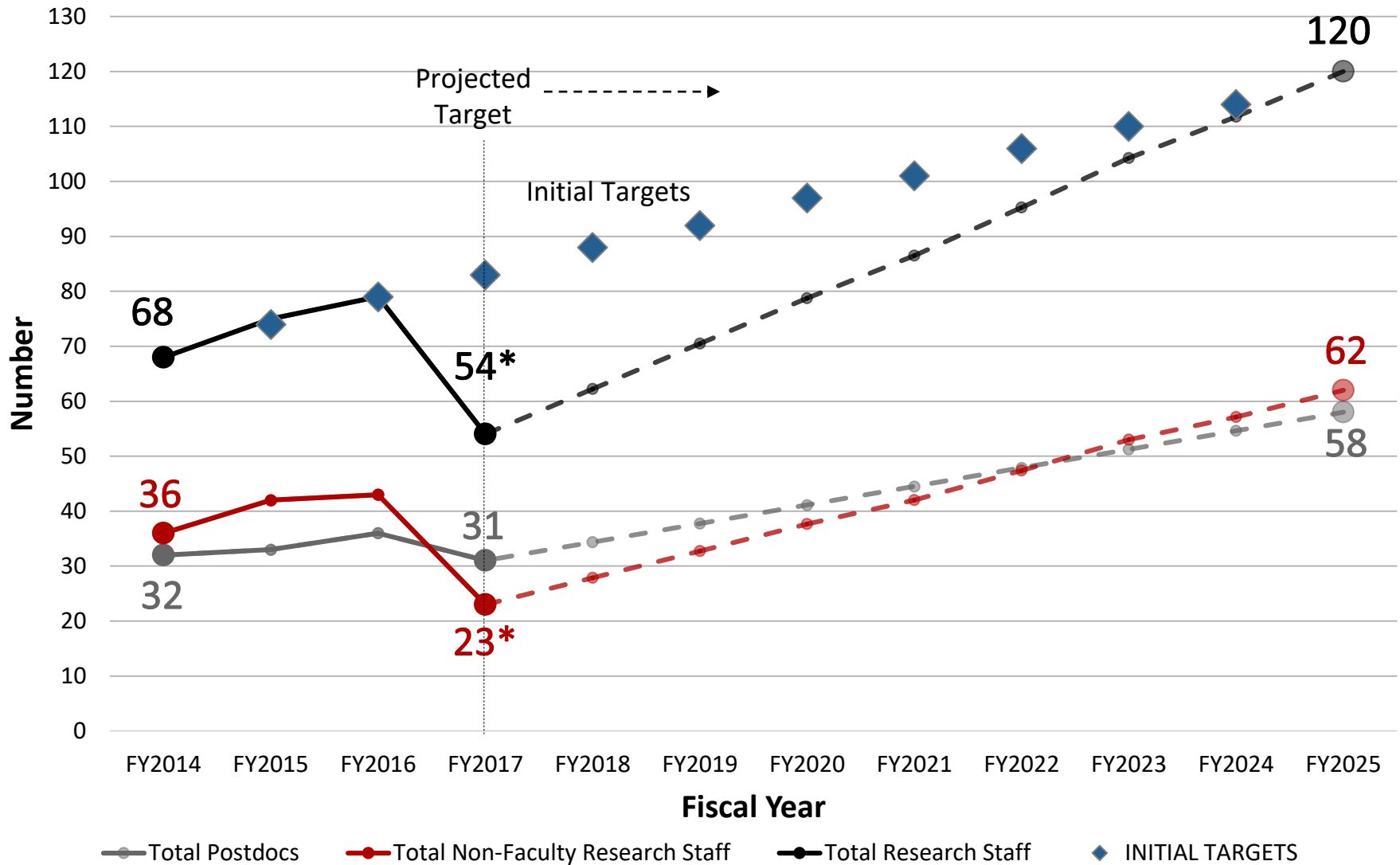
Detailed R1 Goals: Doctoral Graduates



Detailed R1 Goals: Tenure and Tenure Track Faculty

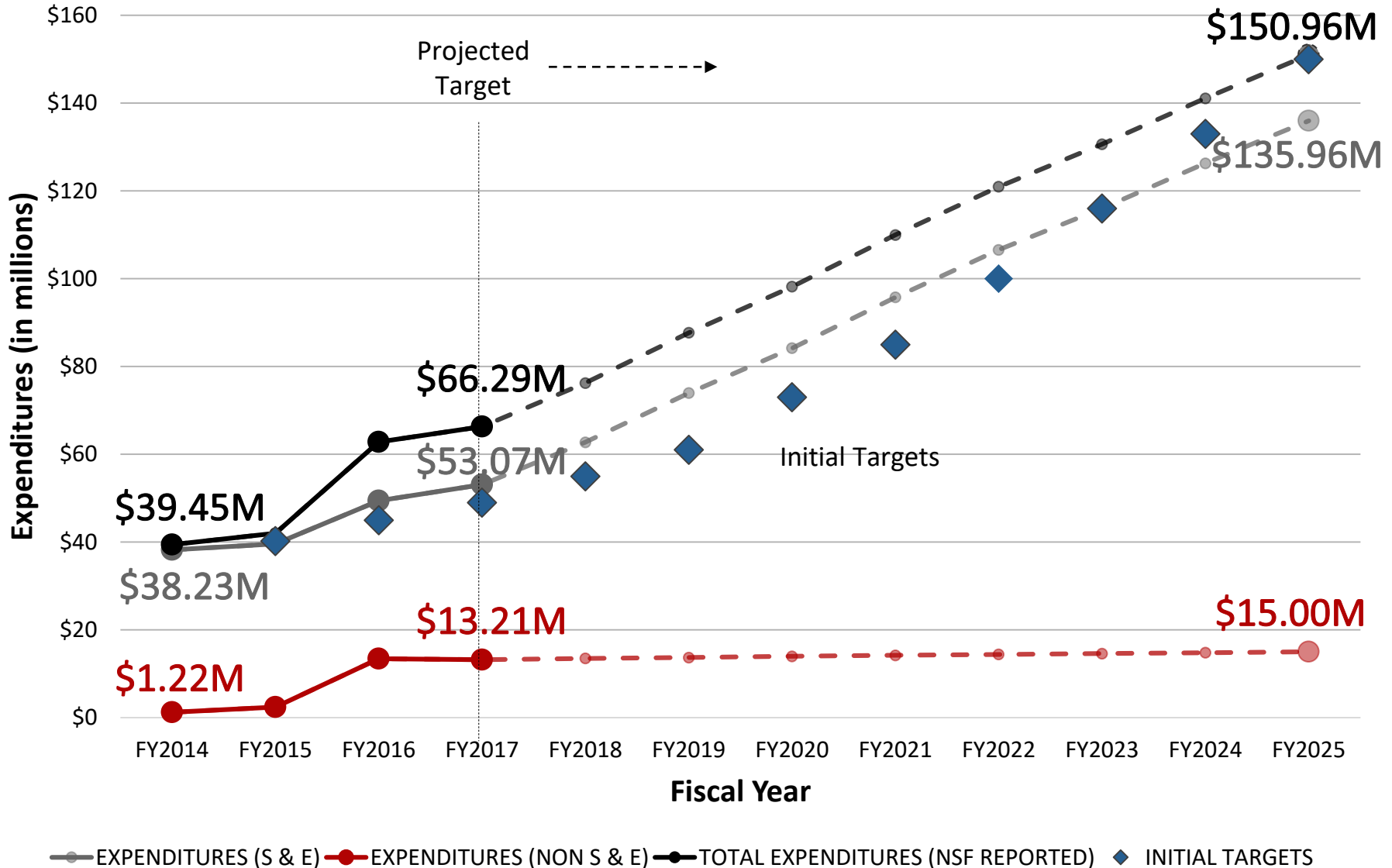


Detailed R1 Goals: Non-faculty Research Staff*



*Change in personnel classifications in Workday

Detailed R1 Goals: Research Expenditures*



*FY16 includes reporting research salaries not supported by external grants

Health for Nevada Initiative

- Current allocation is for Health Disparities Research Initiative
 - 9 new faculty lines
 - New graduate student research and postdoctoral fellows
 - Research-infrastructure staffing
- Future allocations for:
 - Additional faculty hires, graduate student fellowships, and research staff
 - Sports research and innovation
 - Neuroscience
 - Undergraduate education and workforce development
 - Graduate research fellowships

UNLV Projected Budgetary Needs to Meet R1 Goals

	N	Salary/Fringe	Total Salary
Faculty	105	\$175,000	\$18,375,000
Startup	105	\$300,000	\$31,500,000
Graduate Assistants	210	\$30,000	\$6,300,000
Post Doc and Nonfaculty Research Staff	56	\$75,000	\$4,200,000
Sponsored Program Support Staff	7	\$70,000	\$490,000

Cost Projections With No Student Fee Growth or Health for NV Initiative

Year	New Research Intensive Faculty	Salary Cost at \$175K Avg	New PD & Research Staff	Salary Cost at \$75K Avg	New GA	Stipend Cost at \$30K Avg	SPS Staff	Salary Cost at \$70K Avg	Start Up Cost at \$300K Avg	Total Cost
FY 19	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00
FY 20	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00
FY 21	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00
FY 22	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00
FY 23	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00
FY 24	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00
FY 25	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00
Total	105	\$ 18,375,000.00	56	\$4,200,000.00	210	\$6,300,000.00	7	\$490,000.00	\$ 31,500,000.00	\$ 60,865,000.00

Cost Projection With Student Fee Growth

Year	New Research Intensive Faculty	Salary Cost at \$175K Avg	New PD & Research Staff	Salary Cost at \$75K Avg	New GA	Stipend Cost at \$30K Avg	SPS Staff	Salary Cost at \$70K Avg	Start Up Cost at \$300K Avg	Total Cost	Projected Student Fee Growth 2% Enroll 4% Fee	Cost Minus Fee Growth
FY 19	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 1,821,010.33	\$ 6,873,989.67
FY 20	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 1,931,727.76	\$ 6,763,272.24
FY 21	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,049,176.81	\$ 6,645,823.19
FY 22	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,173,766.76	\$ 6,521,233.24
FY 23	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,305,931.78	\$ 6,389,068.22
FY 24	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,446,132.43	\$ 6,248,867.57
FY 25	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,594,857.28	\$ 6,100,142.72
Total	105	\$ 18,375,000.00	56	\$4,200,000.00	210	\$6,300,000.00	7	\$490,000.00	\$ 31,500,000.00	\$ 60,865,000.00	\$ 15,322,603.14	\$ 45,542,396.86

Cost Projection With Student Fee Growth and Health for NV

Year	New Research Intensive Faculty	Salary Cost at \$175K Avg	New PD & Research Staff	Salary Cost at \$75K Avg	New GA	Stipend Cost at \$30K Avg	SPS Staff	Salary Cost at \$70K Avg	Start Up Cost at \$300K Avg	Total Cost	Projected Student Fee Growth 2% Enroll 4% Fee	Health for NV Initiative	Cost Minus New Revenue
FY 19	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 1,821,010.33	\$ 2,900,000.00	\$ 3,973,989.67
FY 20	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 1,931,727.76	\$ 7,250,000.00	\$ (486,727.76)
FY 21	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,049,176.81	\$ 14,500,000.00	\$ (7,854,176.81)
FY 22	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,173,766.76		\$ 6,521,233.24
FY 23	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,305,931.78		\$ 6,389,068.22
FY 24	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,446,132.43		\$ 6,248,867.57
FY 25	15	\$ 2,625,000.00	8	\$ 600,000.00	30	\$ 900,000.00	1	\$ 70,000.00	\$ 4,500,000.00	\$ 8,695,000.00	\$ 2,594,857.28		\$ 6,100,142.72
Total	105	\$ 18,375,000.00	56	\$ 4,200,000.00	210	\$ 6,300,000.00	7	\$ 490,000.00	\$ 31,500,000.00	\$ 60,865,000.00	\$ 15,322,603.14	\$ 24,650,000.00	\$ 20,892,396.86

Where Do We Stand?

Current Estimates Based on 2015 Model

