## Education, Research, & Service Committee

Research Updates and Collaborating for Success Stacey S. Patterson, Ph.D. June 21, 2019

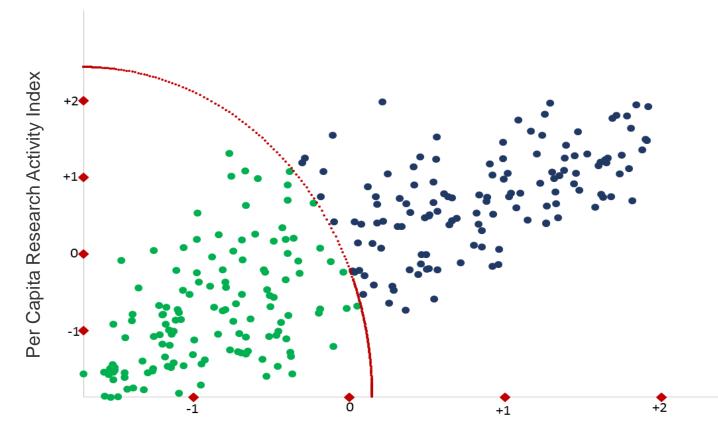


# ARCHRESEARCHR CHRESEARCHRES

Studious inquiry or examination especially: investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws.

### CARNEGIE CLASSIFICATION

## Research Activity Index Results Based on Rank-order Data



The University of Tennessee, Knoxville, is the only public R1 institution in Tennessee.

Aggregate Research Activity Index

### SPONSORED PROGRAMS = GRANTS AND CONTRACTS FACULTY AND STAFF SECURE FOR UT. What do sponsored programs revenues pay for?



## PROPOSALS

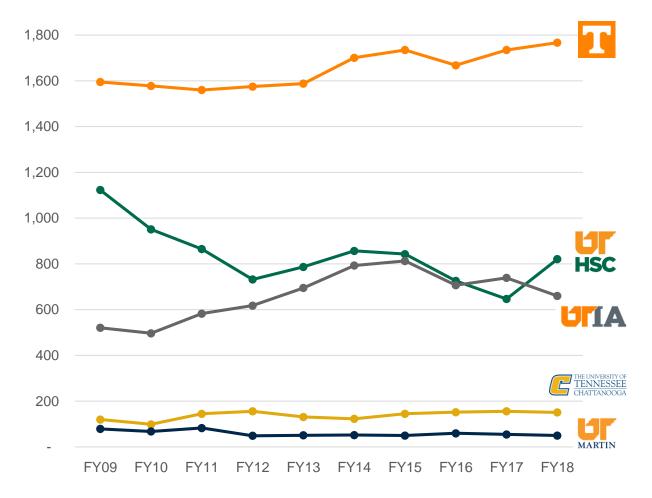
## AWARDS

## **EXPENDITURES**

### PROPOSALS

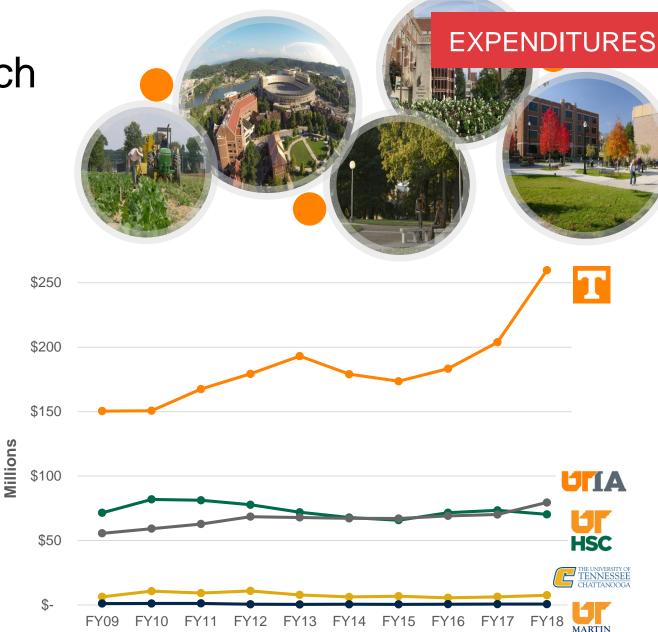
### Number of UT Proposals Submitted

- Last year, researchers across the UT System submitted over 3,400 proposals for extramural funding.
- Campus research offices are working to find new opportunities, remove barriers and increase the proposal pipeline.



## Total Research Expenditures by Campus

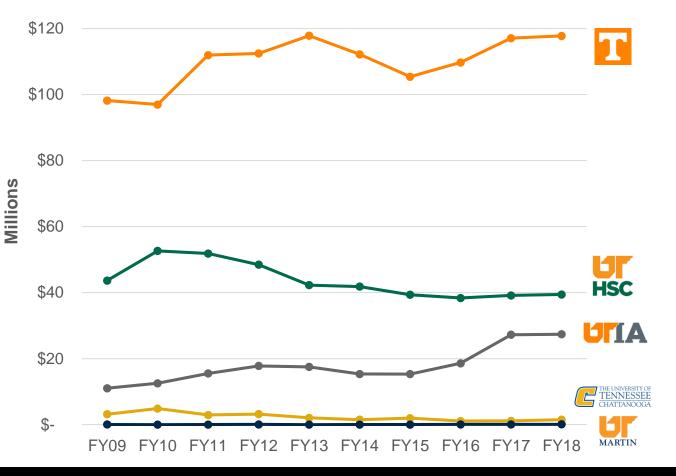
- Research expenditures as reported on the NSF HERD Survey is the gold standard metric.
- System-wide, research expenditures hit an all-time high in FY18 at \$417M increasing 46% since FY09.
- The growth over the last two years at UT Knoxville was driven primarily by IACMI.





### Federal Research Expenditures by Campus

System-wide federal research expenditures have increased 19% since FY09.

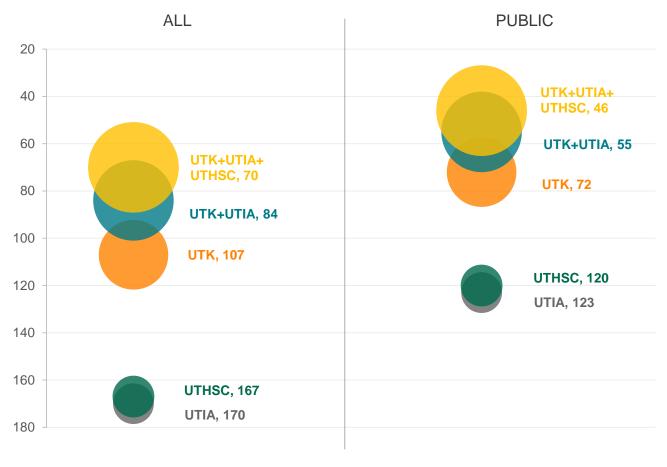


#### THE UNIVERSITY OF TENNESSEE

EXPENDITURES

### Research Expenditure Rankings as Reported on NSF HERD Survey

TOTAL RESEARCH EXPENDITURES

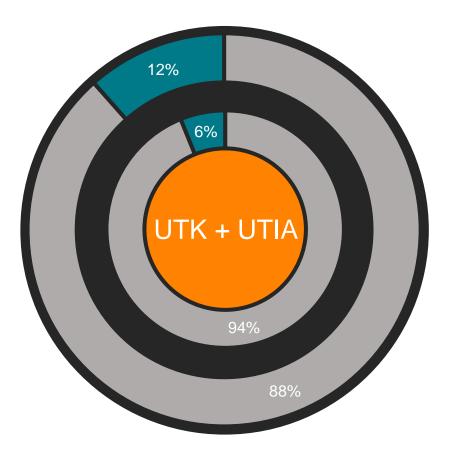


UTC – 375 UTM - NR

UTC – 265 UTM - NR

How do we continue to grow research funding?

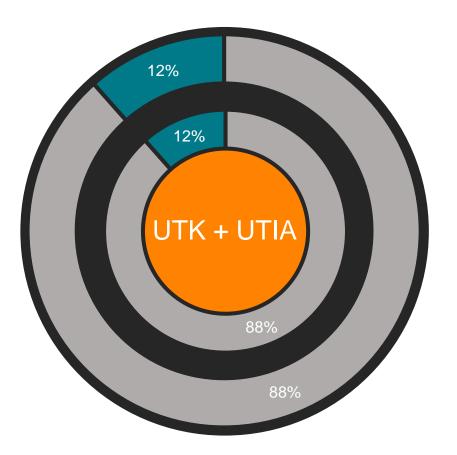
## **Diversify Sources of Funding**



As a percentage of total funding, Aspirational Peers have twice as much private funding as the combined UT Knoxville and UTIA institution. Closing the private funding gap is worth \$18MM to our institution.

2017 Private

## **Diversify Sources of Funding**



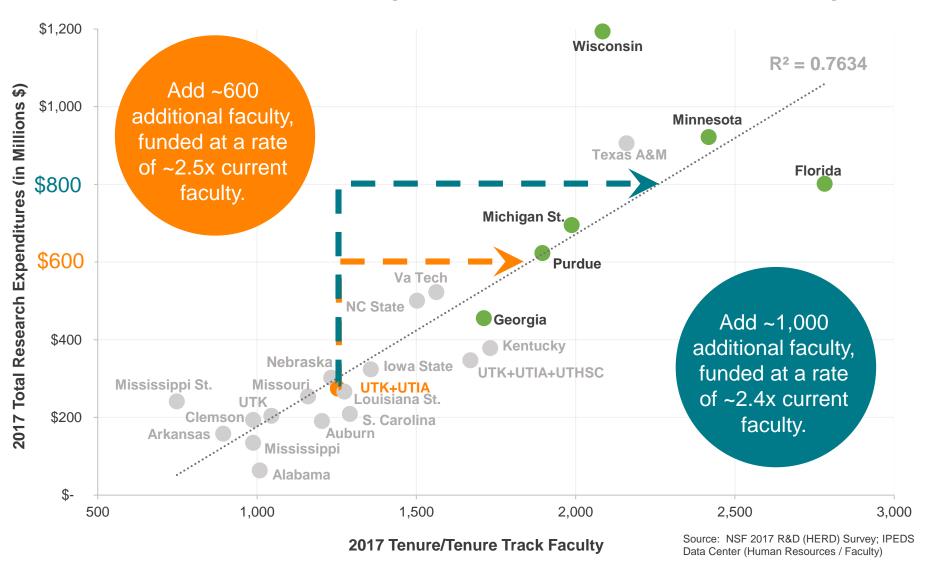
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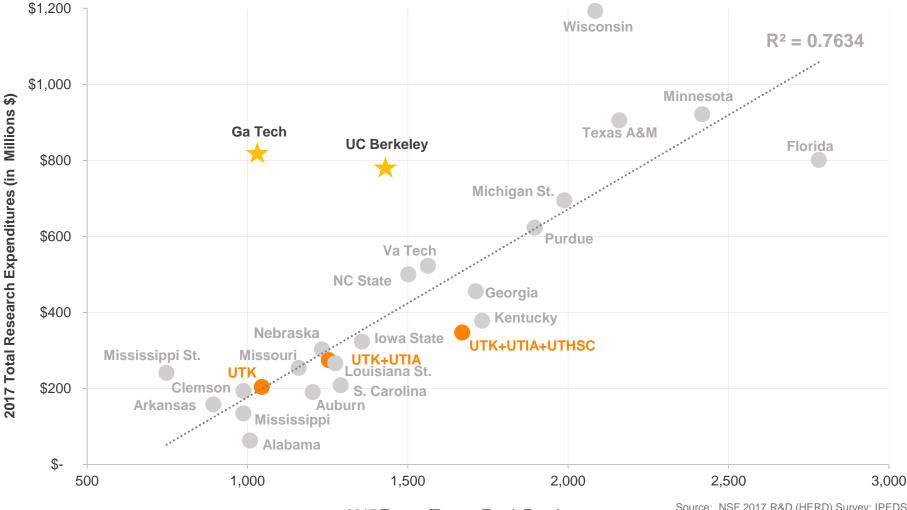
### Traditional Approach: Add Faculty



### TOTAL RESEARCH FUNDING What would it take to grow *total* research funding?



### TOTAL RESEARCH FUNDING What is different at Georgia Tech & UC Berkeley?



2017 Tenure/Tenure Track Faculty

Source: NSF 2017 R&D (HERD) Survey; IPEDS Data Center (Human Resources / Faculty)



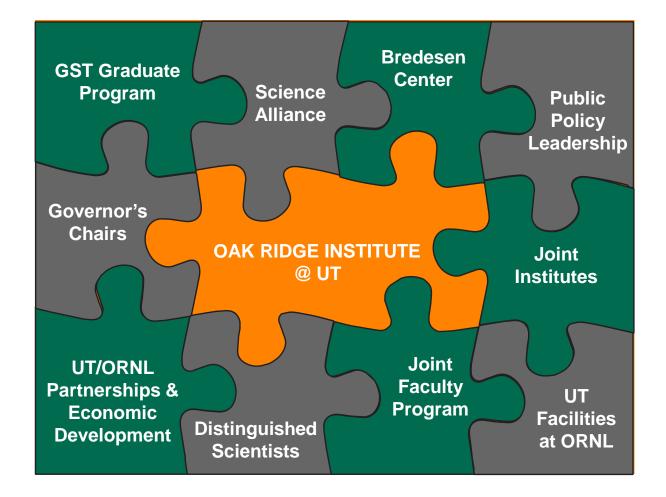
# OAK RIDGE NATIONAL LABORATIONAL LABORATIONAL LABORATIONAL LABORATION DE DESTRUCTION DE LA COMPACTIONAL LABORATIONAL LABORATION DE LA COMPACTION DE LA COMPACTICA COMPACTICA DE LA COMPACTICA COMPACTICA COMPACTICA COMPACTICA COMPACTICA COMPACTICA COMPACTICA COMPACTICA COMPACTICA D

Image courtesy of Oak Ridge National Laboratory, U.S. Dept. of Energy.



CAK RIDGE

#### REALIZING THE FULL POTENTIAL OF THE UT-ORNL PARTNERSHIP



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## Oak Ridge Institute @ UT

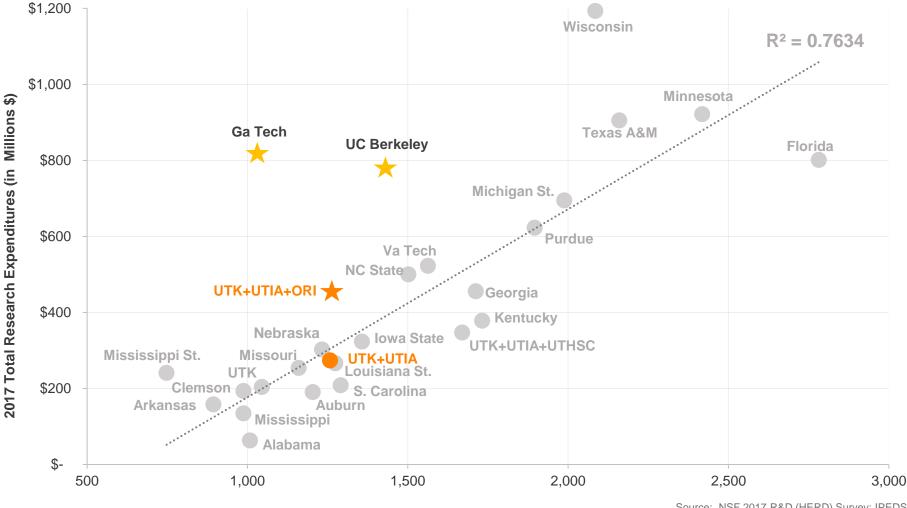
Requires ten-year commitment to become self-sustaining.

- Focused interdisciplinary problem-based science and engineering.
- Recruit 60 new researchers/ faculty complemented by ORNL scientists.
- Grow joint PhD program to 500 students.
- Attract \$150++ million in new research funding annually.



### Positions UT as a Top Public Research Institution!

### TOTAL RESEARCH FUNDING Impact of ORI Investment



2017 Tenure/Tenure Track Faculty

Source: NSF 2017 R&D (HERD) Survey; IPEDS Data Center (Human Resources / Faculty)

## Conclusion

To grow UT's research enterprise, we must employ both traditional and novel approaches:

- Identify opportunities and eliminate barriers to success
- Diversify funding sources
- Recruit faculty in growth areas
- Leverage and enlarge our unique partnership with ORNL

## Thank you!

#### Acknowledgements:

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