

University of Tennessee
Office of Research & Engagement

Quarterly Research Activity Report Q2 FY19

Cumulative for July 1, 2018 – December 31, 2018



Grant Rigney, UT's eighth Rhodes Scholar, is a Haslam Scholar and Neyland Scholar majoring in chemical and biomolecular engineering. He aspires to be a surgeon—possibly a transplant surgeon—and wants to do public health research with the goal of helping to improve health services to the elderly, poor, and otherwise vulnerable patients.



THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

OFFICE OF RESEARCH &
ENGAGEMENT

A Message from the AVCRD

The university continues to show an upward trend in proposal submissions through the first two quarters of fiscal year 2019 (Q1-Q2 FY19), with an increase of 1% over this time last year. However, the total proposal amount requested is down 27% compared to the first two quarters of fiscal year 2018 (Q1-Q2).

The Office of Research and Engagement attributes this decline to fewer proposal submissions to the National Science Foundation (NSF) programs. NSF eliminated proposal deadlines for the majority of its programs beginning in 2018 in an attempt to reduce the burden of the grant review system on its staff and outside researchers. NSF piloted the no-deadline policy starting with a limited number of its programs within the Geosciences directorate and noticed that the number of proposals declined by half in several programs within this directorate following the implementation of this procedure.

Proposal submissions for other sponsors are stable throughout the first two quarters of FY19.

Some of the positive takeaways for the first two quarters of FY19 (as compared to the first two quarters of fiscal year 2018) are:

- The College of Communication and Information (CCI) and the College of Social Work (SW) continue to see substantial increases in proposal submissions and requested amount.
- The College of Education, Health, and Human Sciences (EHHS) requested the highest proposal amount in the last five years (Q1-Q2) at \$36 million.
- The College of Social Work is currently more than \$2 million ahead of their five-year average in awarded amount through the first two quarters of the fiscal year.
- UT Research Centers and Institutes (RCI) have seen a 60% increase in award amount received, or \$4.5 million.
- The Department of Energy (DOE) award amount increased by \$3 million.
- Through the first two quarters, the research expenditures from the Department of Defense (DOD) are up 30% from Q1-Q2 FY18 and 38% from the 5 year average.
- 68% of all funding received throughout the first two quarters of FY19 came from Federal Agencies.



A handwritten signature in black ink, appearing to read 'R. Nobles'.

Robert Nobles
Interim Vice Chancellor for Research

PROPOSALS, AWARDS, & R&D EXPENDITURES: FY19 Q1-Q2 vs FY18 Q1-Q2 (Table 1)

| College/Center/Institute | Proposals Submitted | | | | Awards Received | | | | Estimated Total R&D Expenditures (HERD ¹) | |
|--|---------------------|------------------------|----------------------|-----------------------|------------------|------------------------|---------------------|-----------------------|---|-----------------------|
| | No. | % No. Incr. Over FY 18 | Amount Requested | % \$ Incr. Over FY 18 | No. ³ | % No. Incr. Over FY 18 | Amount Received | % \$ Incr. Over FY 18 | Amount Expended | % \$ Incr. Over FY 18 |
| College of Architecture & Design | 2 | 100% | \$73,240 | 47% | 1 | -50.0% | \$100,000 | -23% | \$597,760 | -7% |
| College of Arts & Sciences | 206 | -19% | \$43,146,728 | -33% | 194 | -7.6% | \$16,369,999 | -17% | \$31,135,638 | 4% |
| Haslam College of Business | 13 | -13% | \$1,512,044 | -28% | 13 | -7.1% | \$1,926,625 | 8% | \$5,694,294 | 5% |
| College of Communication & Information | 16 | 100% | \$7,426,011 | 643% | 10 | 0.0% | \$1,670,048 | 14% | \$1,855,592 | 18% |
| College of Education, Health, & Human Sciences | 60 | 54% | \$35,786,053 | 156% | 28 | 21.7% | \$5,486,847 | 27% | \$3,982,957 | 11% |
| Tickle College of Engineering | 342 | 9% | \$99,721,187 | -16% | 303 | 2.4% | \$31,562,746 | -17% | \$39,749,748 | 4.0% |
| College of Law | 2 | 100% | \$198,946 | 1454% | 0 | -100.0% | \$0 | N/C* | \$960,675 | 23% |
| College of Nursing | 15 | 88% | \$4,237,219 | -31% | 11 | 175.0% | \$1,505,035 | 2440% | \$930,577 | 37% |
| College of Social Work | 23 | 44% | \$14,811,063 | 168% | 16 | -20.0% | \$4,679,382 | 84% | \$916,717 | 46% |
| Research Centers & Institutes | 157 | -9% | \$23,111,830 | -79% | 184 | 1.1% | \$11,919,472 | 60% | \$11,717,938 | -37% |
| UT Space Institute | 23 | -12% | \$7,092,099 | 39% | 13 | -50.0% | \$817,997 | -54% | \$2,337,290 | 4% |
| Other ² | 6 | -14% | \$965,047 | -9% | 21 | 75.0% | \$5,136,072 | 9% | \$2,243,169 | -6% |
| Total | 865 | 1% | \$238,081,467 | -27% | 794 | -1% | \$81,174,224 | -1% | \$102,122,355 | -3% |

Notes

- HERD - The Higher Education Research and Development Survey, successor to the Survey of Research and Development Expenditures at Universities and Colleges, is the primary source of information on R&D expenditures at U.S. colleges and universities.
- R&D expenditure data is collected from the "NSF Research Survey Estimate" report provided by UT IRIS Data Warehouse. The "NSF Research Survey Estimate" report provides an estimate of the R&D expenditures for UT colleges and research centers and institutes. This report does not contain expenditure data from the UT Research Foundation, which is included in the official NSF HERD survey during the submission of the survey. The expenditures data provided in the Office of Research & Engagement quarterly research activity report should be treated as an estimate reflecting trends for UT colleges and research centers and institutes only.
- Other - This field captures any research proposals, awards, and expenditures not included in the categories above.
- The Number of Awards Received represents the cumulative number of funding award increments. One project may receive multiple funding awards.

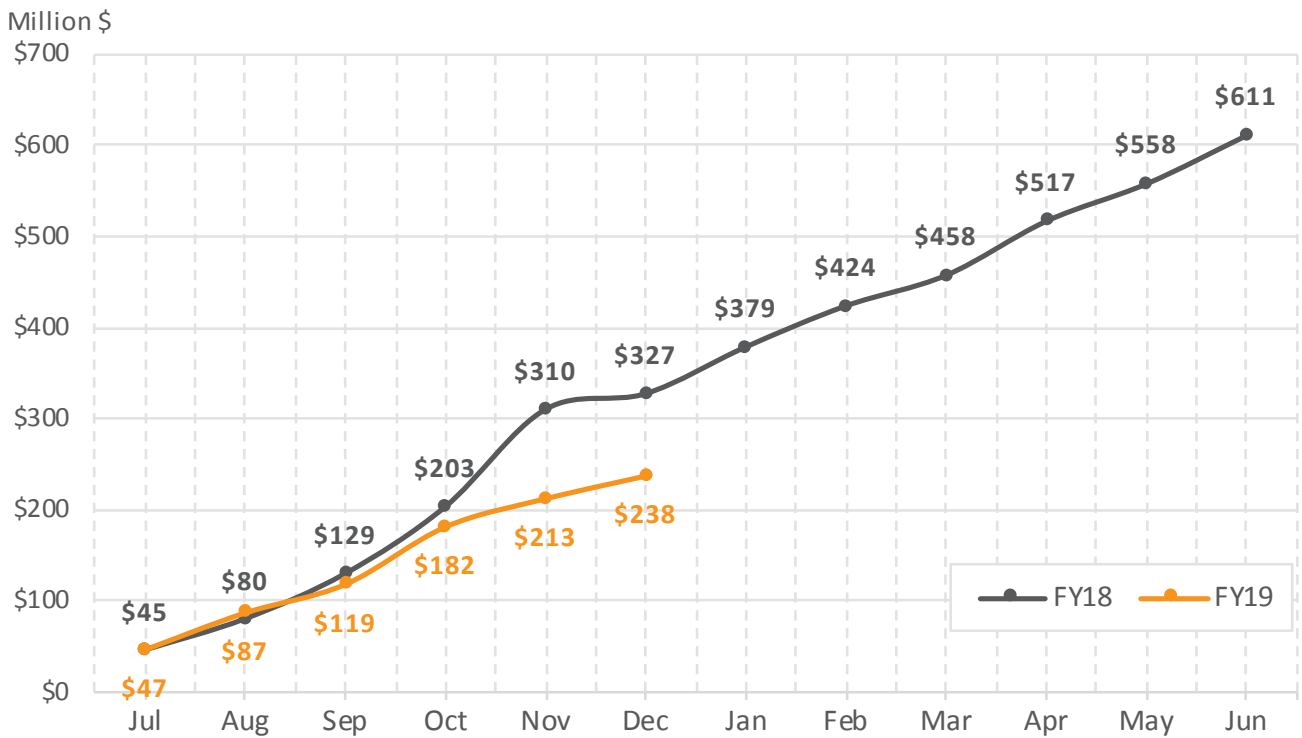
* N/C - Not Calculable

TOP 10 NEW PROJECTS: FY19 Q1-Q2 (Table 2)

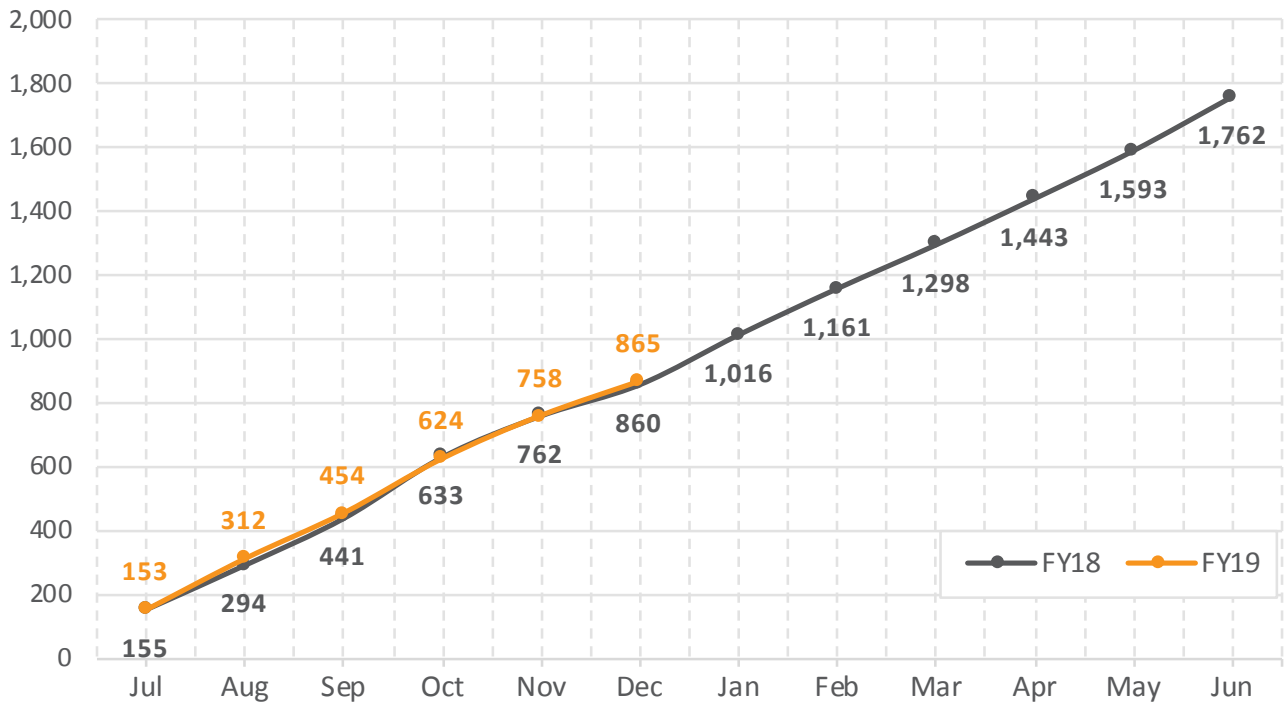
(by total anticipated dollar value)

| Investigators (Primary PI First) | Award Admin Dept | PI Home Department | Project Title | Anticipated Amount | Sponsor | Activity Type | Project Begins | Project Ends |
|---|---|---|--|--------------------|--|------------------|----------------|--------------|
| Blackwell, Michael; Bruce, Donald; Brown, Kathleen; Nugent, William; Daugherty, Linda | Office of Rsch & Public Service | Ctr for Behavioral Health Rsch; Boyd Ctr for Business & Economic Rsch; Office of Rsch & Public Service; Public Health; Social Work | AlignCare | \$2,633,420 | Maddie's Fund | Basic Research | 7/26/18 | 6/30/21 |
| Lindley, Lisa | Nursing | Nursing | Effectiveness of concurrent care to improve pediatric & family outcomes at end of life | \$1,526,304 | National Institute of Nursing Research | Basic Research | 8/1/18 | 6/30/22 |
| Babu, Sudarsanam | Mechanical, Aerospace & Biomedical Engr | Mechanical, Aerospace & Biomedical Engr | Rationalization of Liquid/Solid and Solid/Solid Interphase Instabilities | \$1,500,000 | Dept. of Defense - Office of Naval Research | Basic Research | 8/1/18 | 5/31/23 |
| Lukosi, Eric | JIAM | Nuclear Engr | A State-of-the-Art Neutron Imaging Sensor | \$1,199,986 | Dept of Energy | Applied Research | 9/1/18 | 8/31/21 |
| Schmisser, John; Balas, Mark | UTSI MABE Program | UTSI MABE Program | ARDVARC: the Aero Response to Deformable Vehicle Architectures | \$1,147,922 | Dept. of Defense - Air Force Research Laboratory | Applied Research | 11/20/18 | 11/19/21 |
| Mannik, Jaan; Mannik, Jaana | Physics | Physics; Biochemistry, Cellular & Molecular Biology | Coordination mechanisms between cell division & chromosome segregation in E. coli | \$1,143,406 | National Institute of General Medical Sciences | Basic Research | 9/1/18 | 7/31/22 |
| Hillyer, Sarah | Ctr for Sport, Peace, & Society | Ctr for Sport, Peace, & Society | Empowering Global Change Agents through Sports | \$1,140,000 | Dept. of State | Public Service | 9/19/18 | 12/31/19 |
| Smith, David; Wolbers, Kimberly; Lacava, Carol; Shahan, Cheryl | Theory & Practice in Teacher Education | Theory & Practice in Teacher Education | Tennessee Educational Interpreting and Deaf Education | \$1,119,719 | Dept. of Education | Public Service | 1/1/19 | 12/31/23 |
| Trinh, Cong; Raghavan, Sankar | Chemical & Biomolecular Engr | Chemical & Biomolecular Engr | Harnessing the Robustness of Undomesticated Yarrowia lipolytica Strains | \$1,108,175 | Dept. of Energy | Basic Research | 9/15/18 | 9/14/21 |
| Lopez, Ruth; McLennon, Susan | Nursing | Nursing | ADVANCE: Assessment of Disparities and Variation for Alzheimer's disease in Nursing home Care at End of Life | \$1,047,001 | Hebrew Rehabilitation Center (HRC) | Basic Research | 6/1/18 | 7/31/21 |

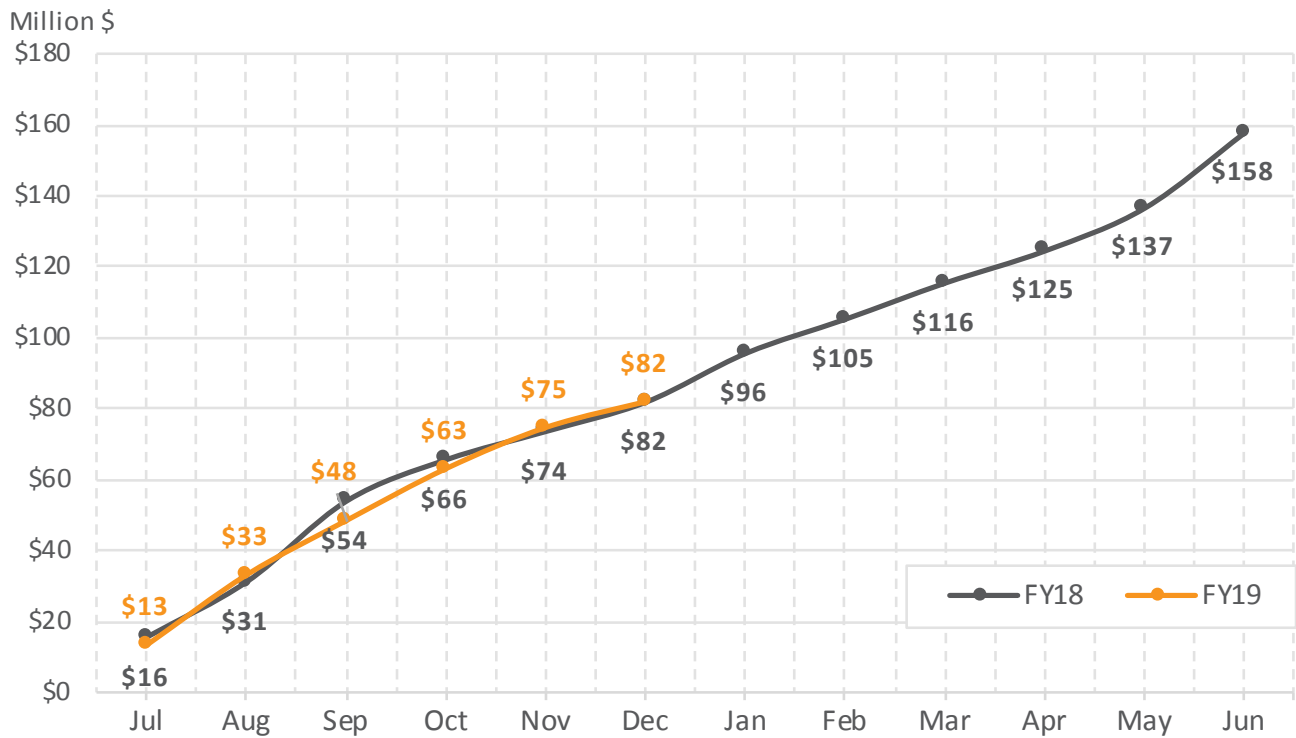
CUMULATIVE PROPOSAL AMOUNT: FY19 vs. FY18 (Figure 1)



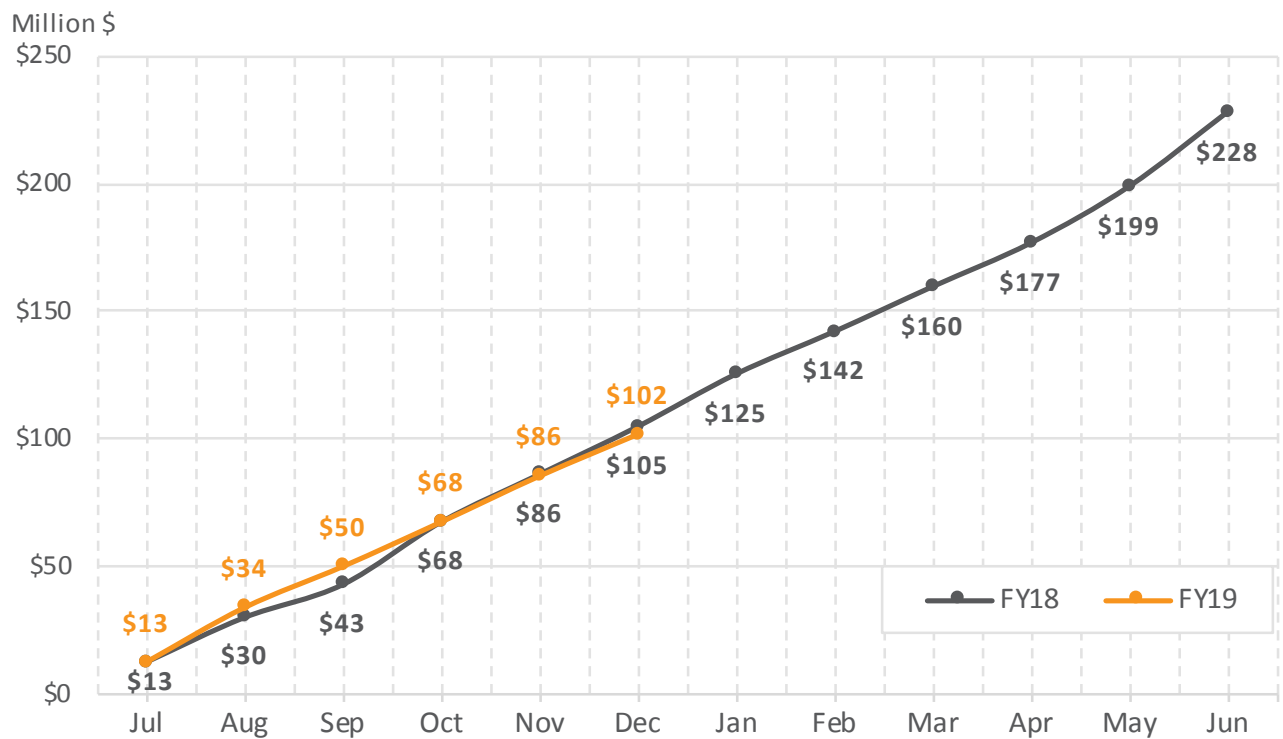
CUMULATIVE PROPOSAL COUNT: FY19 vs. FY18 (Figure 2)



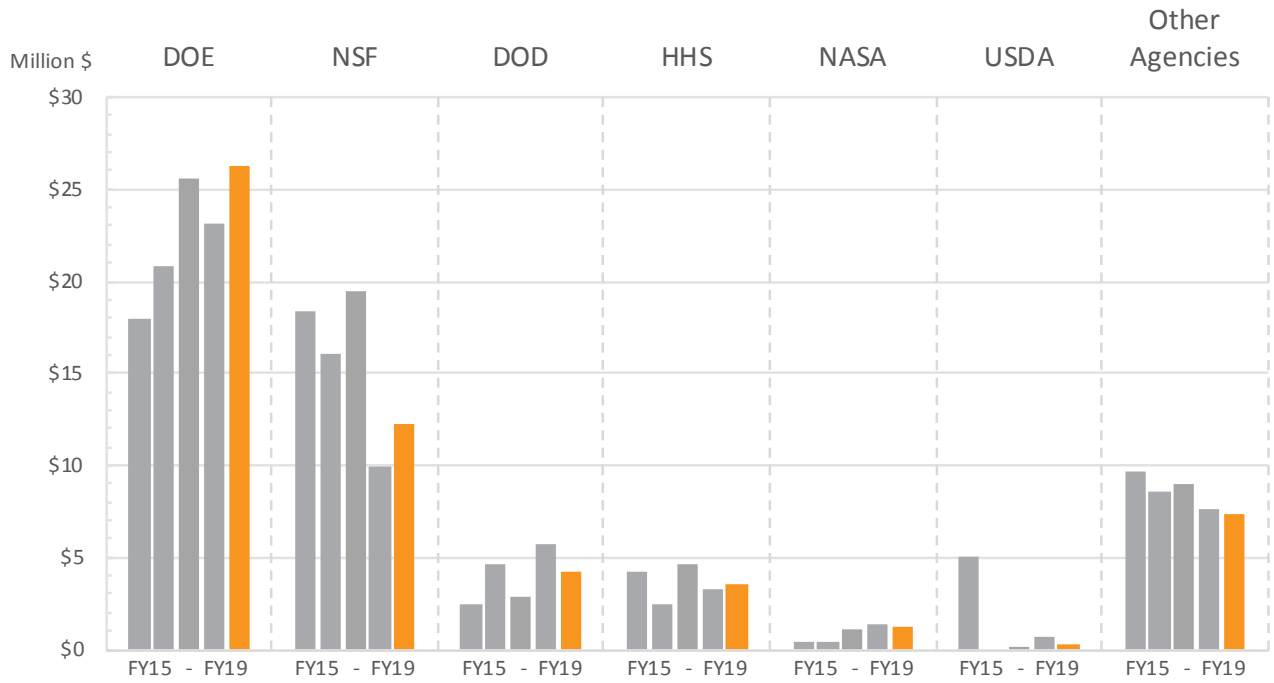
CUMULATIVE AWARD AMOUNT: FY19 vs. FY18 (Figure 3)



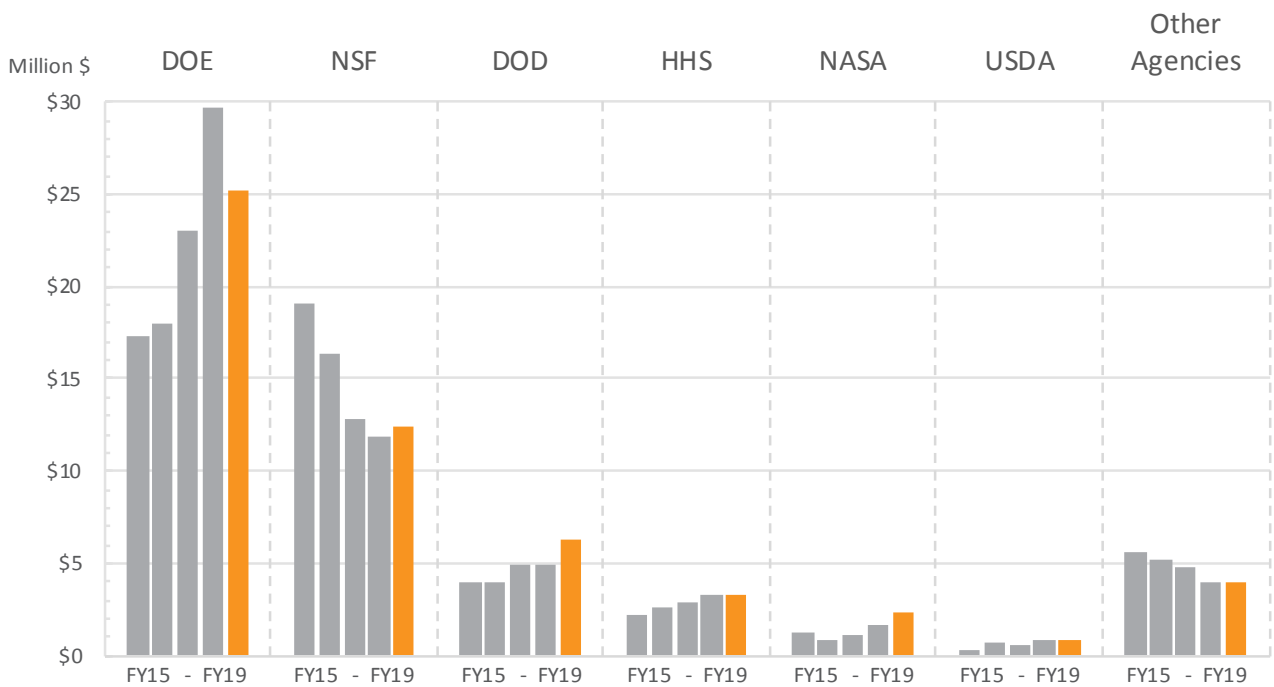
CUMULATIVE AMOUNT EXPENDED ON R&D: FY19 vs. FY18 (Figure 4)



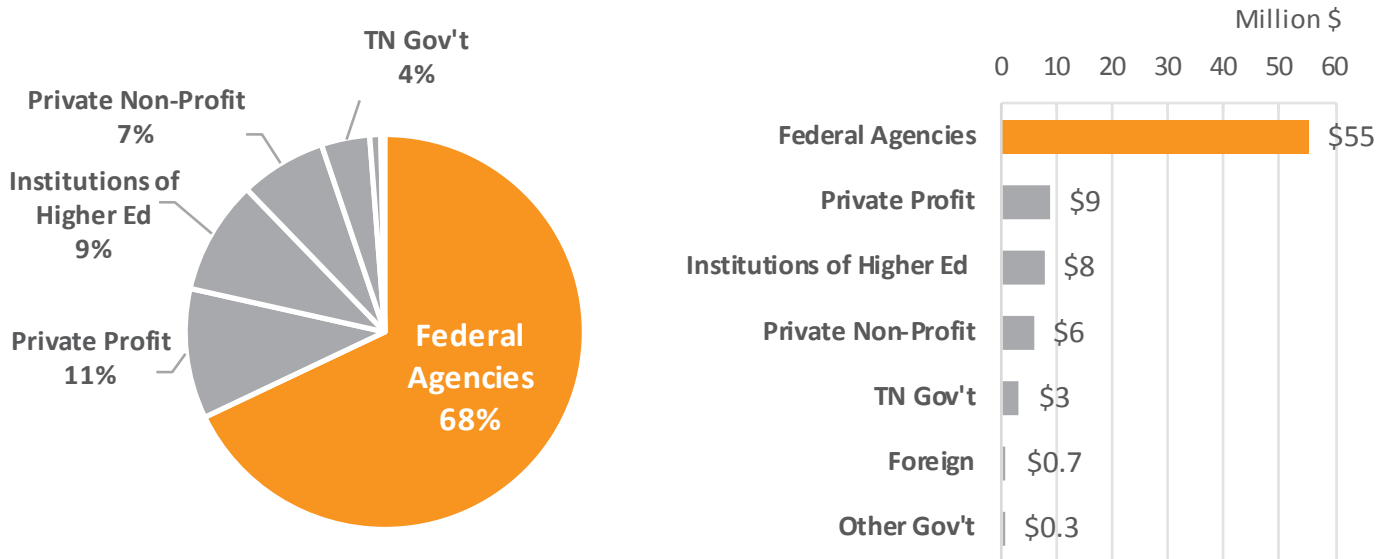
AWARDED DOLLARS BY FEDERAL AGENCY: FY15-FY19 Q1-Q2 (Figure 5)



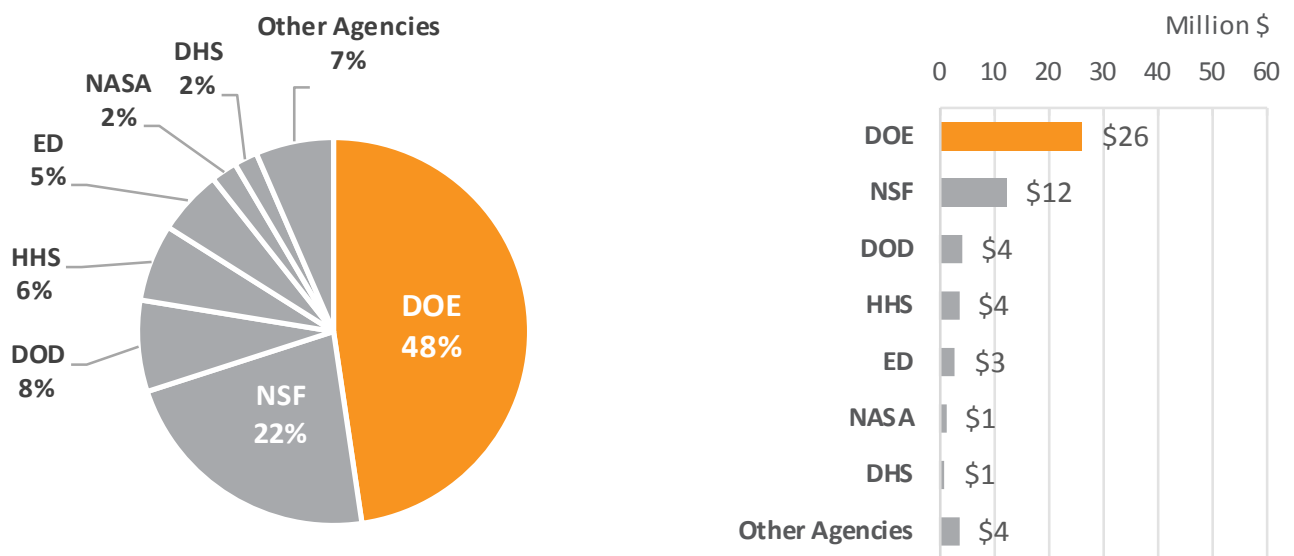
R&D EXPENDITURES BY FEDERAL AGENCY: FY15-FY19 Q1-Q2 (Figure 6)



AWARDED DOLLARS BY SOURCE: FY19 Q1-Q2 (Figure 7)

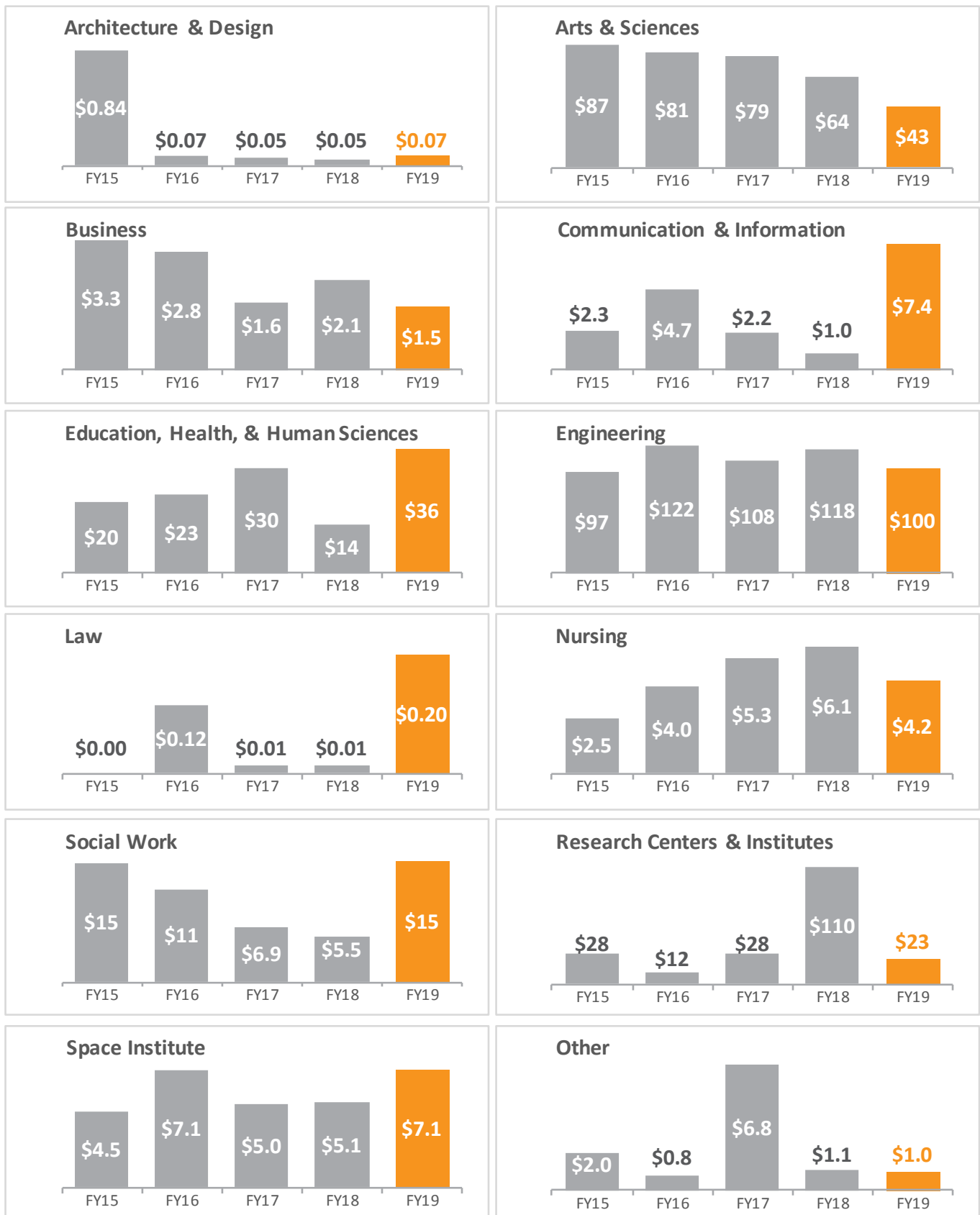


FEDERAL AWARDED DOLLARS BY AGENCY: FY19 Q1-Q2 (Figure 8)



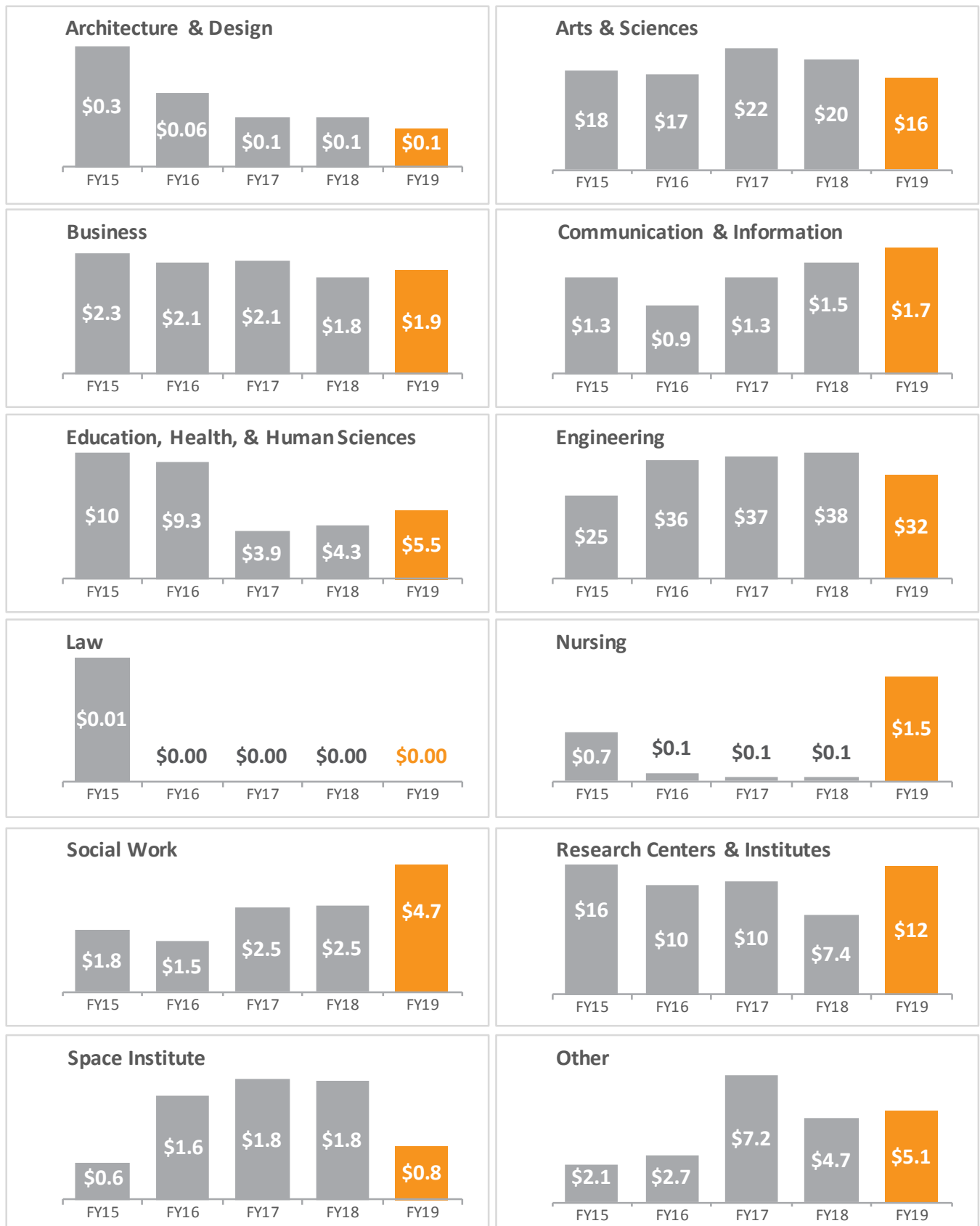
PROPOSED AMOUNT BY COLLEGE: FY15-FY19 Q1-Q2 (Figure 9)

(Dollars in Millions. Each chart has its own scale)



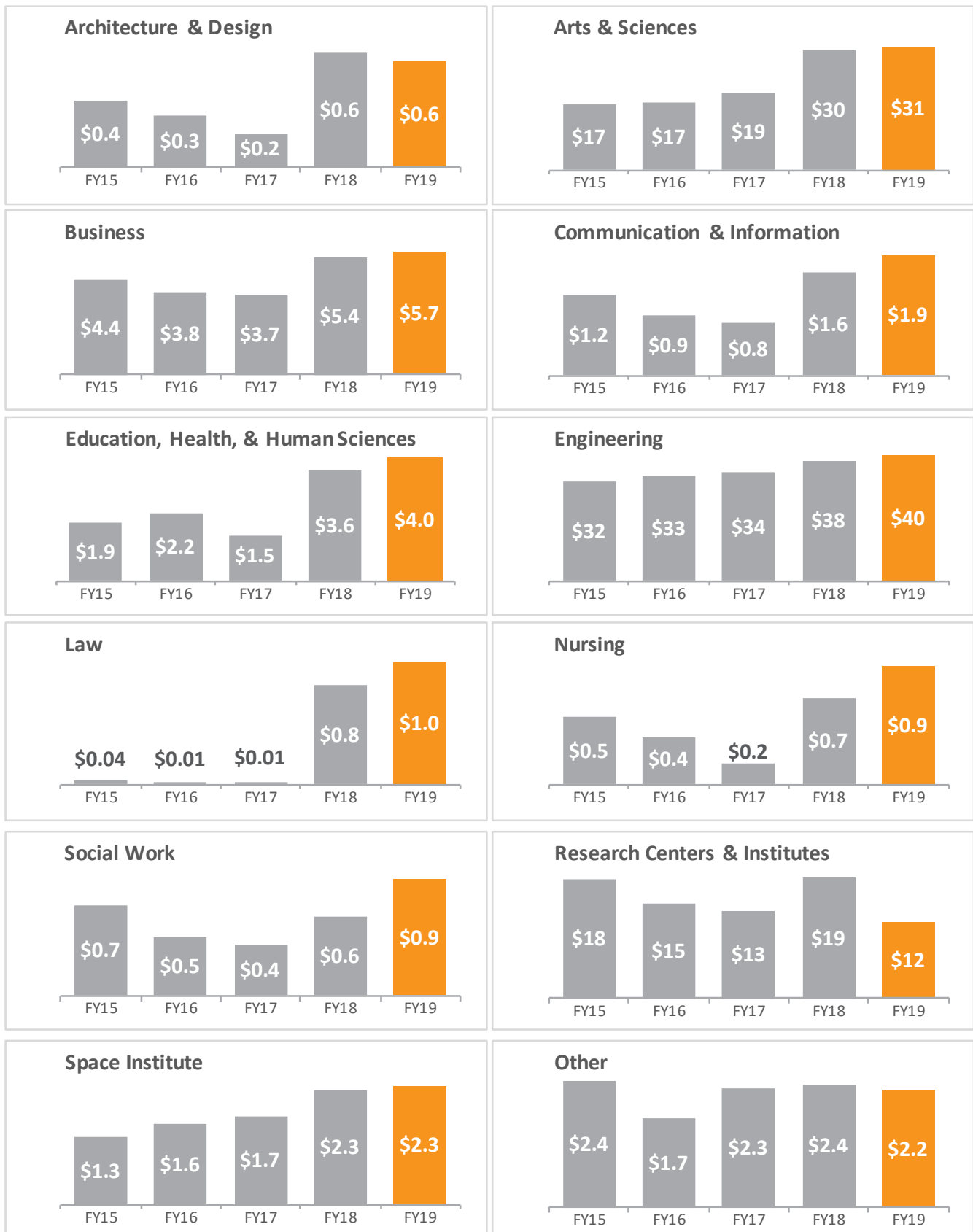
AWARDED AMOUNT BY COLLEGE: FY15-FY19 Q1-Q2 (Figure 10)

(Dollars in Millions. Each chart has its own scale)



AMOUNT EXPENDED ON R&D BY COLLEGE: FY15-FY19 Q1-Q2 (Figure 11)

(Dollars in Millions, Each chart has its own scale)



Data Notes

Each Quarterly Research Report is a cumulative fiscal year-to-date summary. Award, proposal, and expenditure data include UT Knoxville, UT Space Institute, and University Wide Administration. Data depicting colleges and research centers and institutes is presented to show trends within each unit.

Award and proposal data is collected from Cayuse SP (electronic system for routing of sponsored projects) and includes projects sponsored for Basic, Applied and Developmental research activities as well as for Public Service, Training, Instruction, Scholarship, and Fellowship activities.

To ensure consistency of the Office of Research and Engagement reports, all quarterly and annual report award selection is based on the UT Report Date (award effective date). The proposal selection is based on the Proposal Approval Date.

R&D expenditure data is collected from the “NSF Research Survey Estimate” report provided by UT IRIS Data Warehouse. The data for the “NSF Research Survey Estimate” report is collected and reported according to the NSF HERD Survey and covers three R&D activities - basic research, applied research, and development. These R&D activities can have the following sources of funds: U.S. federal government, state and local government, business, nonprofit organizations, institutional funds, and other sources such as funds from foreign entities and gifts designated by the donors for research. Please visit the following link to learn more about the survey and R&D definitions: <https://www.nsf.gov/statistics/srvyherd/>.

The “NSF Research Survey Estimate” report provides an estimate of the R&D expenditures for UT colleges and research centers and institutes. This report does not contain expenditure data from the UT Research Foundation, which is included in the official NSF HERD survey during the submission of the survey. The expenditures data provided in the Office of Research & Engagement quarterly research activity report should be treated as an estimate reflecting trends for UT colleges and research centers and institutes only.

There are occasionally variations in the numbers reported for each quarter as information is updated into Cayuse SP and IRIS on a daily basis. The data for this report were collected on February 6th, 2019. The annual report will represent the final amounts for that fiscal year.