

University of Tennessee  
Office of Research & Engagement

---

# Quarterly Research Activity Report Q1 FY18

---

Cumulative for July 1, 2017 – September 30, 2017



**The Undergraduate Awards**—often referred to as the “junior Nobel Prize”—announced the winners of its 2017 program and three UT students are ranked among the world’s best and brightest undergraduate researchers. Alexandra Brito, a May 2017 graduate, was named a Global Winner; Sierra Roark, also a May graduate, was a Regional Winner; and senior Rachel Hunt, was Highly Commended. *(Photo by Undergraduate Awards)*



THE UNIVERSITY OF  
TENNESSEE  
KNOXVILLE

---

OFFICE OF RESEARCH &  
ENGAGEMENT

## A Message from the AVCRD

In the first quarter of fiscal year 2018 (Q1 FY18), proposal submissions look strong. The total amount requested was \$130 million, an increase of 13% over the first quarter of fiscal year 2017 (table 1, fig. 1). The College of Nursing, Haslam College of Business, UT Space Institute, Research Centers and Institutes, and the Tickle College of Engineering, have all contributed to this increase (table 1, fig. 9).

The total award amount received this quarter is down 19% compared to the first quarter of the FY17 (table 1, fig. 3). It is an across-the-board decrease affecting almost all colleges, centers, and institutes (table 1, fig. 10). Most of the reduction comes from federal agencies, with the biggest drop being from the National Science Foundation (fig. 5). However, it is reassuring that the total award amount this quarter was only \$4.5 million less than the five-year average for the first quarter in the last five fiscal years of FY14-FY18.

Also encouraging is the increase of \$8.6 million in the amount awarded by the Tennessee local and state government—\$10 million in Q1 FY18 compared to the \$1.4 million in Q1 FY17. The award amount received from the state represents 20% of the total awarded amount received this quarter (fig. 7).

Looking at the total research expenditures, most of our colleges, centers and institutes have displayed slight to significant increases in the total amount expended on Research and Development (R&D) this quarter compared to the Q1 FY17. The Tickle College of Engineering and UT Space Institute both exhibit a growing trend in their total R&D expenditures in the last five fiscal years (table 1, fig. 11).

### Notable Achievements

Much of the growth in state funding comes from two projects totaling \$8 million received by Jerry Everett, associate director of the Tickle College of Engineering's Center for Transportation Research. One project, "Law Enforcement Liaison Administration," seeks to plan, develop and implement a statewide initiative to promote education and enforcement of the current laws designed to increase occupant protection usage and reduce the number of impaired driving crashes. The other project, "UT Program Admin Grant," supports the mission of the Tennessee Highway Safety Office by supplying UT staff and maintenance of the THSO office in Nashville (table 2).

John Wodarski, professor in the College of Social Work and the Center for Behavioral Health Research, anticipates \$2.5 million from the Department of Health and Human Services's Substance Abuse and Mental Health Services Administration. His project, "Tennessee HIV/AIDS, Related Substance Use Disorders, and Mental Disorders Services Program," expands and enhances culturally competent services in minority communities for those with a greater risk for HIV/AIDS and unmet mental health needs (table 2).

Also noteworthy is the \$1.3 million project led by Thomas Papenbrock, professor in the Department of Physics and Astronomy. The "Nuclear Computational Low Energy Initiative (NUCLEI)" will use advanced applied mathematics, computer science, and physics to accurately describe nuclear structure and reactions across the whole nuclear chart as well as the properties of bulk nucleonic matter (table 2).

### New Program

The Office of Research and Engagement launched a [research seed grant program](#) in September, which offers internal funding awards ranging between \$15-\$75 thousand for faculty to conduct research over a one-year period. The goal of the program is to generate research data and results that will lead to additional and more substantial external grant submissions, new intellectual directions for our faculty, and new relationships across colleges, departments, and centers.

As part of this program, the winners of these awards will not only receive funding, but will have the opportunity to work with our research development experts to create customized research strategy plans. The seed program has funding opportunities in four thematic areas: community engagement, interdisciplinary research, mission agency research, and health and human services research. It is our expectation that this program will have significant impact on proposal submissions and awards in FY19-20.

Finally, you will see that we have made some changes to the quarterly report this year. We included some new charts and redesigned some old ones hoping that these charts will be more useful and revealing. We welcome and appreciate your feedback on this new version of the report. Please let us know what you think or if you would like to see additional information in this report in the future.



Bruce LaMattina  
Associate Vice Chancellor for Research Development



**PROPOSALS, AWARDS, & R&D EXPENDITURES: FY18 Q1 vs FY17 Q1 (Table 1)**

College/Center/Institute	Proposals Submitted				Awards Received				Estimated Total Expenditures (HERD <sup>1</sup> )	
	No.	% No. Incr. Over FY 17	Amount Requested	% \$ Incr. Over FY 17	No. <sup>3</sup>	% No. Incr. Over FY 17	Amount Received	% \$ Incr. Over FY 17	Amount Expended	% \$ Incr. Over FY 17
College of Architecture and Design	1	N/C*	\$49,920	N/C*	0	N/C*	\$0	N/C*	\$85,444	-22%
College of Arts and Sciences	119	-13%	\$32,573,940	1%	132	20%	\$12,968,477	-6%	\$10,319,660	-6%
Haslam College of Business	8	33%	\$1,568,998	219%	9	-25%	\$1,298,389	-4%	\$1,453,009	-24%
College of Communication and Information	3	-63%	\$107,934	-93%	4	33%	\$191,141	-74%	\$408,004	1%
College of Education, Health, and Human Science	25	-26%	\$8,057,540	-50%	9	-36%	\$3,188,241	-11%	\$910,832	2%
Tickle College of Engineering	166	5%	\$59,835,223	34%	165	-4%	\$24,524,315	-7%	\$19,419,731	5%
College of Law	1	0%	\$12,802	0%	0	N/C*	\$0	N/C*	\$12,118	30%
College of Nursing	5	0%	\$5,612,000	1414%	2	0%	\$34,243	1612%	\$140,875	21%
College of Social Work	11	10%	\$1,945,167	-58%	10	-33%	\$1,619,253	-22%	\$358,413	52%
Research Centers and Institutes	91	21%	\$17,006,248	46%	88	-15%	\$3,417,174	-42%	\$8,118,032	14%
UT Space Institute	12	9%	\$2,241,704	47%	11	-8%	\$962,673	-18%	\$1,200,718	25%
Other <sup>2</sup>	1	-75%	\$552,494	-64%	9	-36%	\$2,426,722	-66%	\$1,028,179	-9%
<b>Total</b>	<b>443</b>	<b>-1%</b>	<b>\$129,563,970</b>	<b>13%</b>	<b>439</b>	<b>-4%</b>	<b>\$50,630,629</b>	<b>-19%</b>	<b>\$43,455,015</b>	<b>2%</b>

**Notes**

1. 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.
2. Other – This field captures any research proposals, awards, and expenditures not included in the categories above.
3. The Number of Awards Received represents the cumulative number of funding award increments. One project may receive multiple funding awards.

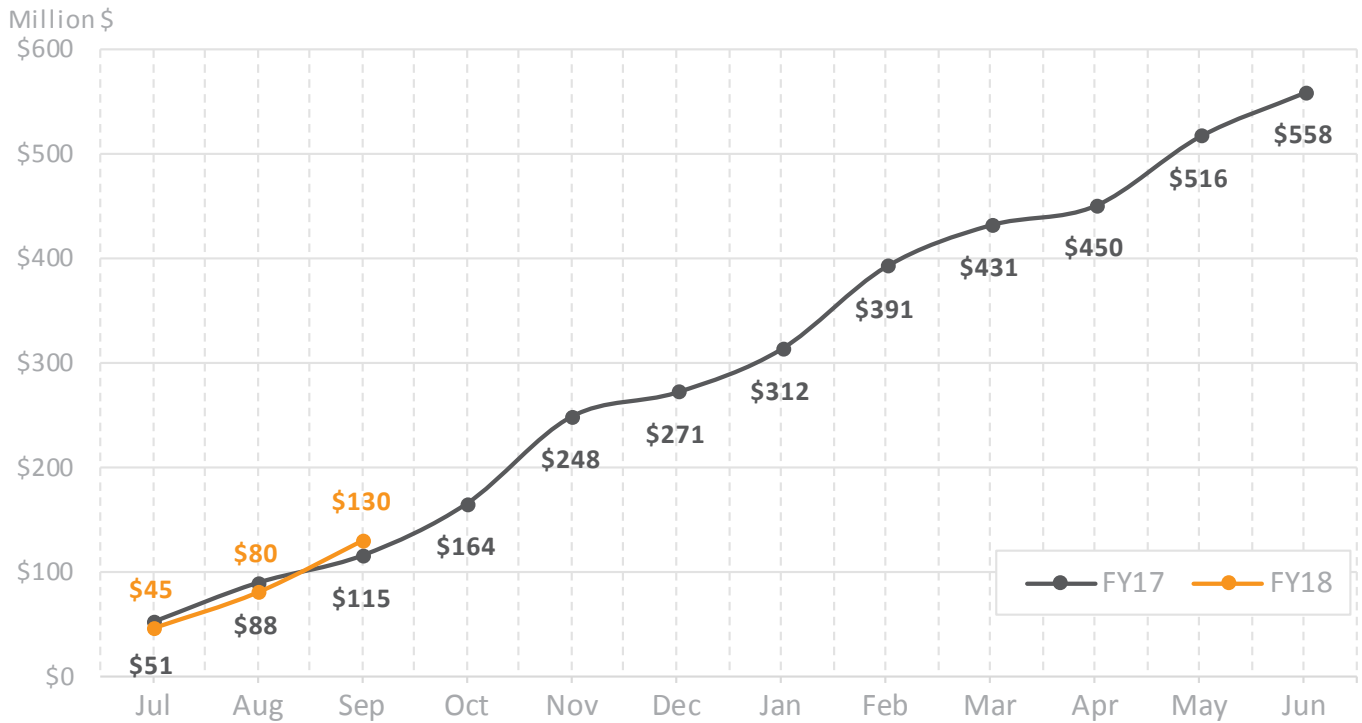
\* N/C - Not Calculable

**TOP 10 NEW PROJECTS: FY18 Q1 (Table 2)**

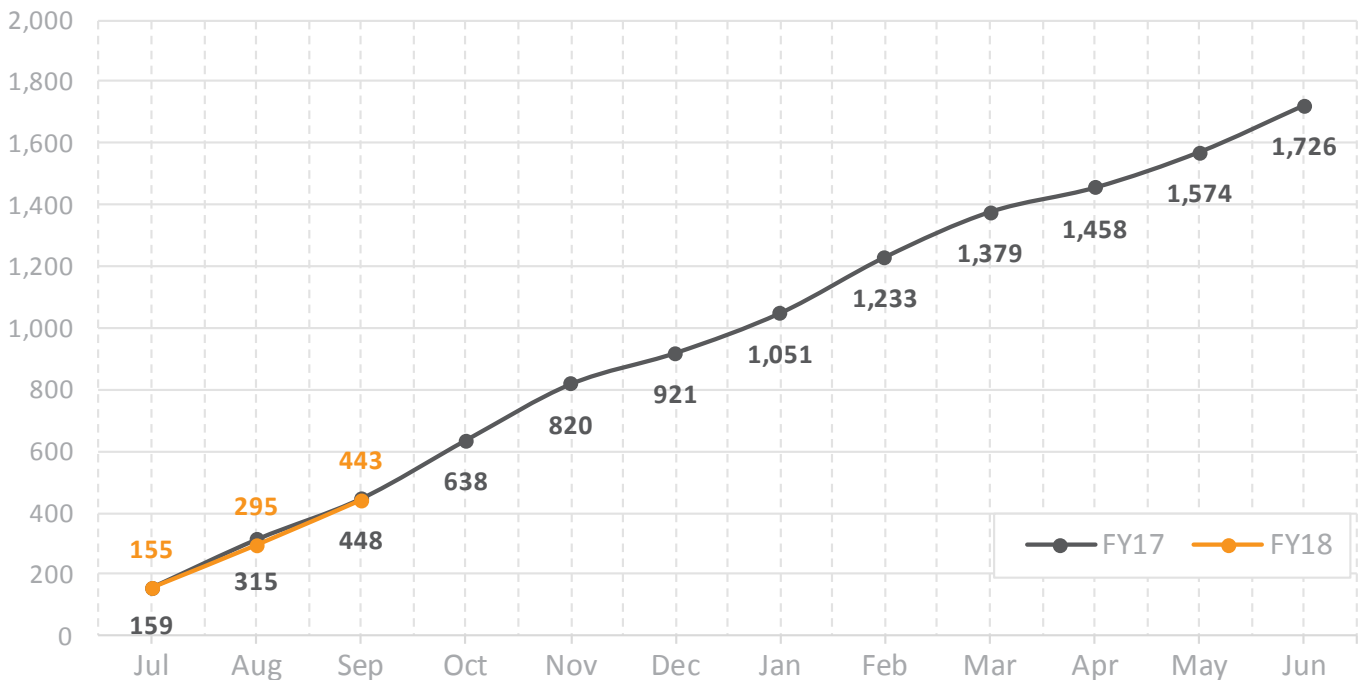
(by total anticipated dollar value)

Investigators (Primary PI First)	Award Admin Dept	PI Home Department	Project Title	Anticipated Amount	Sponsor	Project Begins	Project Ends
Everett, Jerry	Transportation Ctr	Transportation Ctr	Law Enforcement Liaison Administration	\$7,000,000	Tennessee Dept. of Safety	9/29/2017	9/28/2022
Wodarski, John	Ctr for Behavioral Health Rsch	Social Work	Tennessee HIV/AIDS, Related Substance Use Disorders, and Mental Disorders Services Program	\$2,491,093	Dept. of Health-Substance Abuse and Mental Health Services	9/28/2017	9/27/2022
Brewer, Ernest	CAPS Outreach Ctr	CAPS Outreach Ctr	Academic Enrichment Upward Bound 2017-2022	\$1,790,575	Dept. of Education	8/30/2017	5/29/2022
Papenbrock, Thomas	Physics	Physics	Nuclear Computational Low Energy Initiative (NUCLEI)	\$1,269,000	Dept. of Energy - Office of Science	8/30/2017	8/29/2022
Steiner, Andrew; Crosby, Lonnie; Mezzacappa, Anthony	Physics	Physics; JICS	Towards Exascale Astrophysics of Mergers and Supernovae (TEAMS)	\$1,208,000	Dept. of Energy - Office of Science	8/30/2017	8/29/2022
Wodarski, John; Patterson, David	Ctr for Behavioral Health Rsch	Social Work	Tennessee's Homeless Family Services in Supportive Housing	\$1,192,882	Dept. of Health-Substance Abuse and Mental Health Services	9/28/2017	9/27/2020
Hillyer, Sarah; Huffman, Ashleigh	Ctr for Sport, Peace & Society	Ctr for Sport, Peace & Society	Better World: Empowering Global Change Agents through Sports	\$1,130,000	Dept. of State	8/30/2017	12/29/2018
Keffer, David; Parang, Masood; Retherford, Jennifer; Long, Larry; Griffin, Travis; McCord, Rachel; Kocak, Mary; Rawn, Claudia; Wetteland, Christopher; Liaw, Peter	MSE	MSE; Academic & Student Affairs; CEE; Admissions & Records; Engr Diversity Programs; Engr Fundamentals Program	TranSCeND: Transfer Success Co-Design in Engineering Disciplines	\$1,000,000	National Science Foundation	8/30/2017	8/29/2022
Everett, Jerry	Transportation Ctr	Transportation Ctr	UT Program Admin Grant	\$1,000,000	Tennessee Dept. Of Transportation	9/29/2017	9/28/2022
Alexandre-Jouline, Gladys; Hettich, Robert	BCMB	BCMB, Microbiology	Chemotaxis sensing preference in plant-microbe associations	\$898,089	National Science Foundation	7/30/2017	7/29/2020

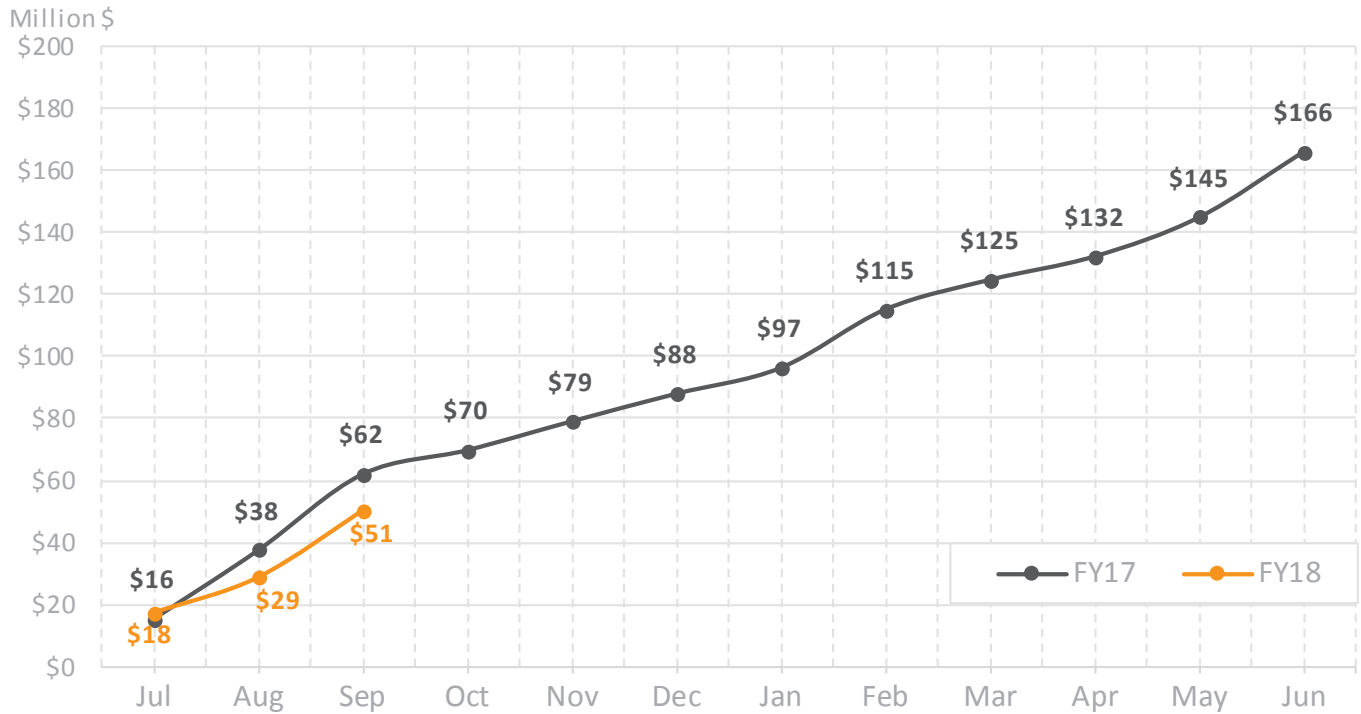
**CUMULATIVE PROPOSAL AMOUNT: FY18 vs. FY17 (Figure 1)**



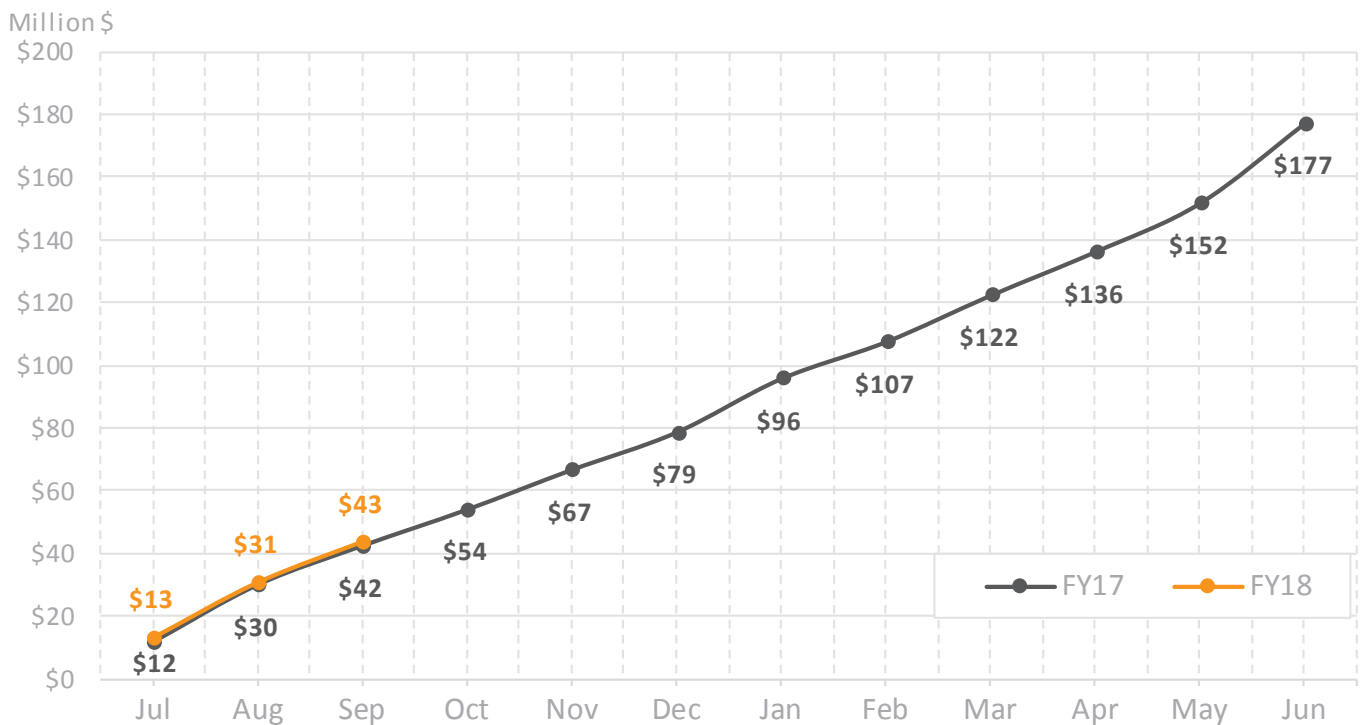
**CUMULATIVE PROPOSAL COUNT: FY18 vs. FY17 (Figure 2)**



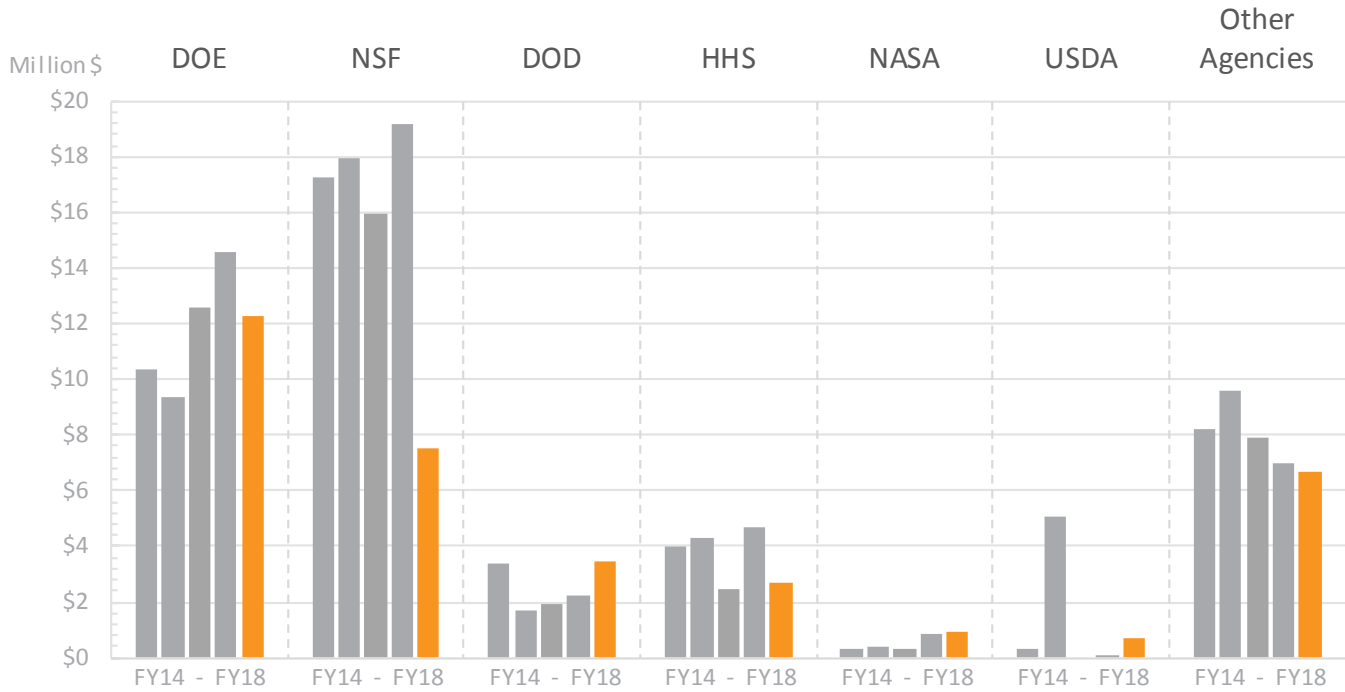
**CUMULATIVE AWARD AMOUNT: FY18 vs. FY17 (Figure 3)**



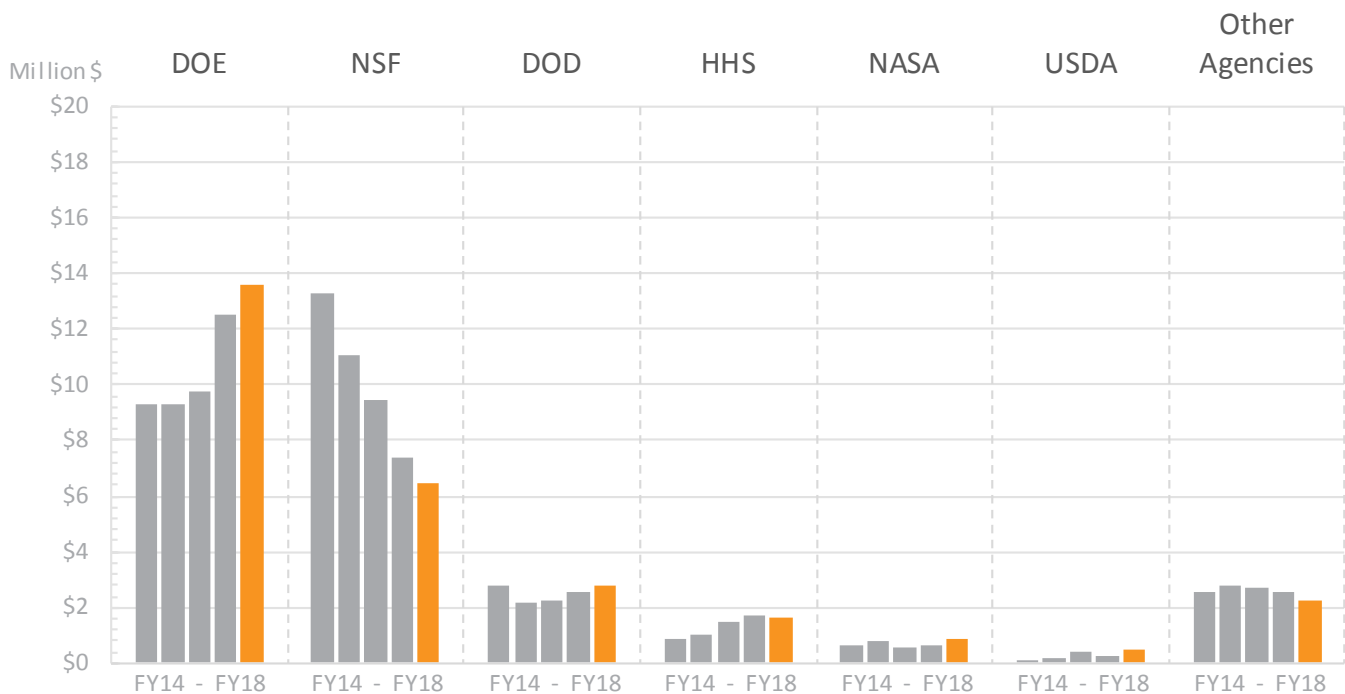
**CUMULATIVE AMOUNT EXPENDED ON R&D: FY18 vs. FY17 (Figure 4)**



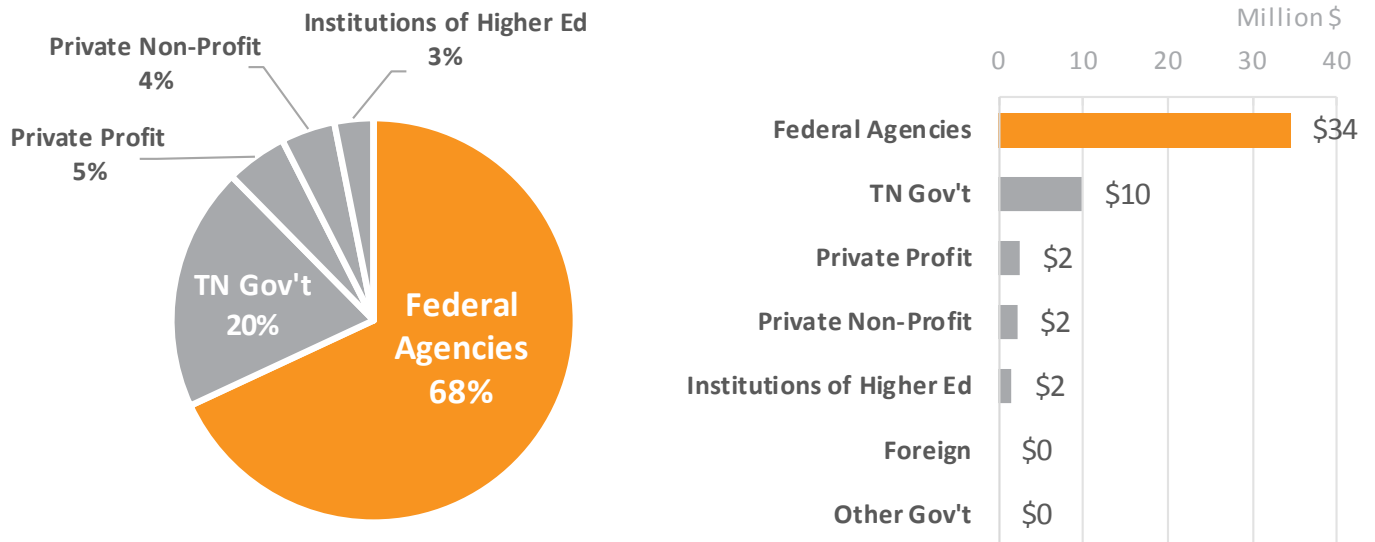
**AWARDED DOLLARS BY FEDERAL AGENCY: FY14-FY18 Q1** (Figure 5)



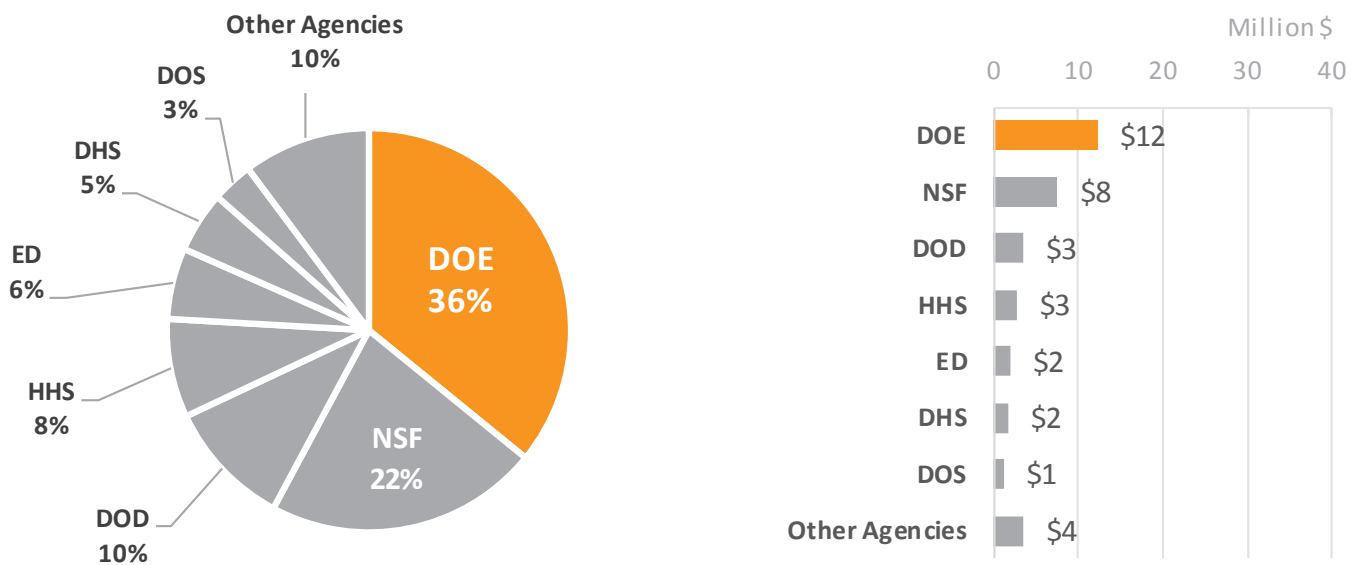
**R&D EXPENDITURES BY FEDERAL AGENCY: FY14-FY18 Q1** (Figure 6)



**AWARDED DOLLARS BY SOURCE: FY18 Q1** (Figure 7)



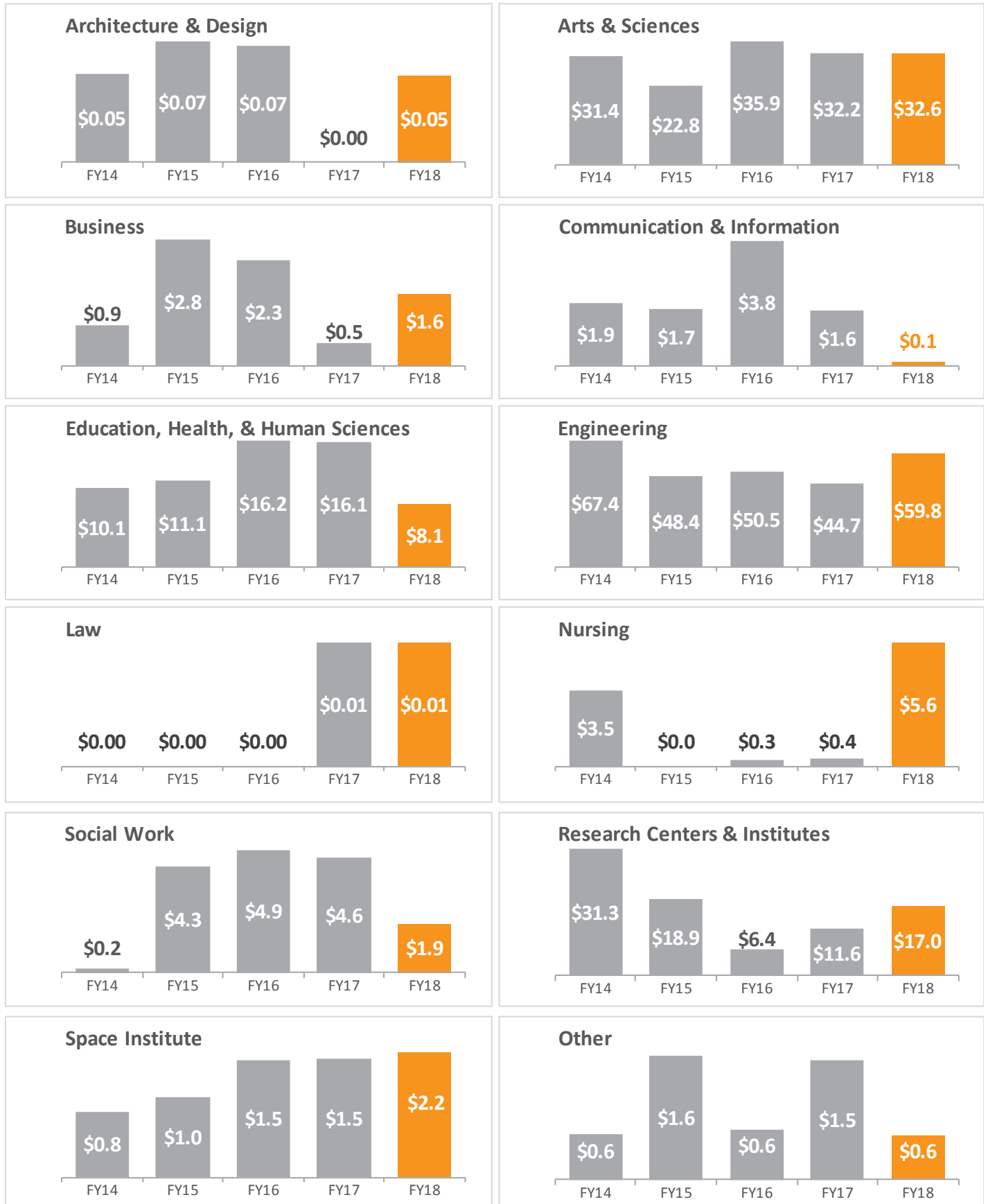
**FEDERAL AWARDED DOLLARS BY AGENCY: FY18 Q1** (Figure 8)





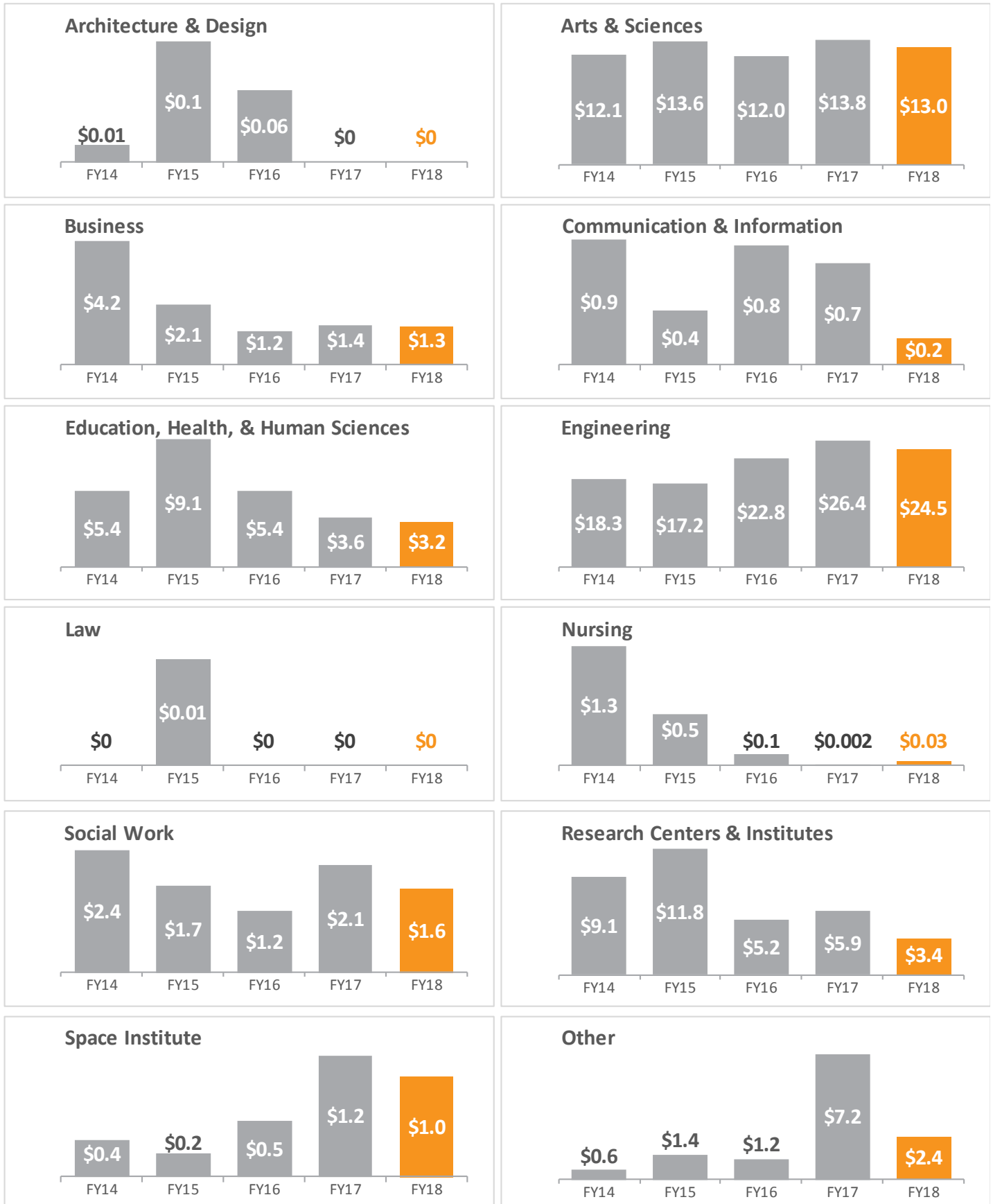
**PROPOSED AMOUNT BY COLLEGE: FY14-FY18 Q1** (Figure 9)

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



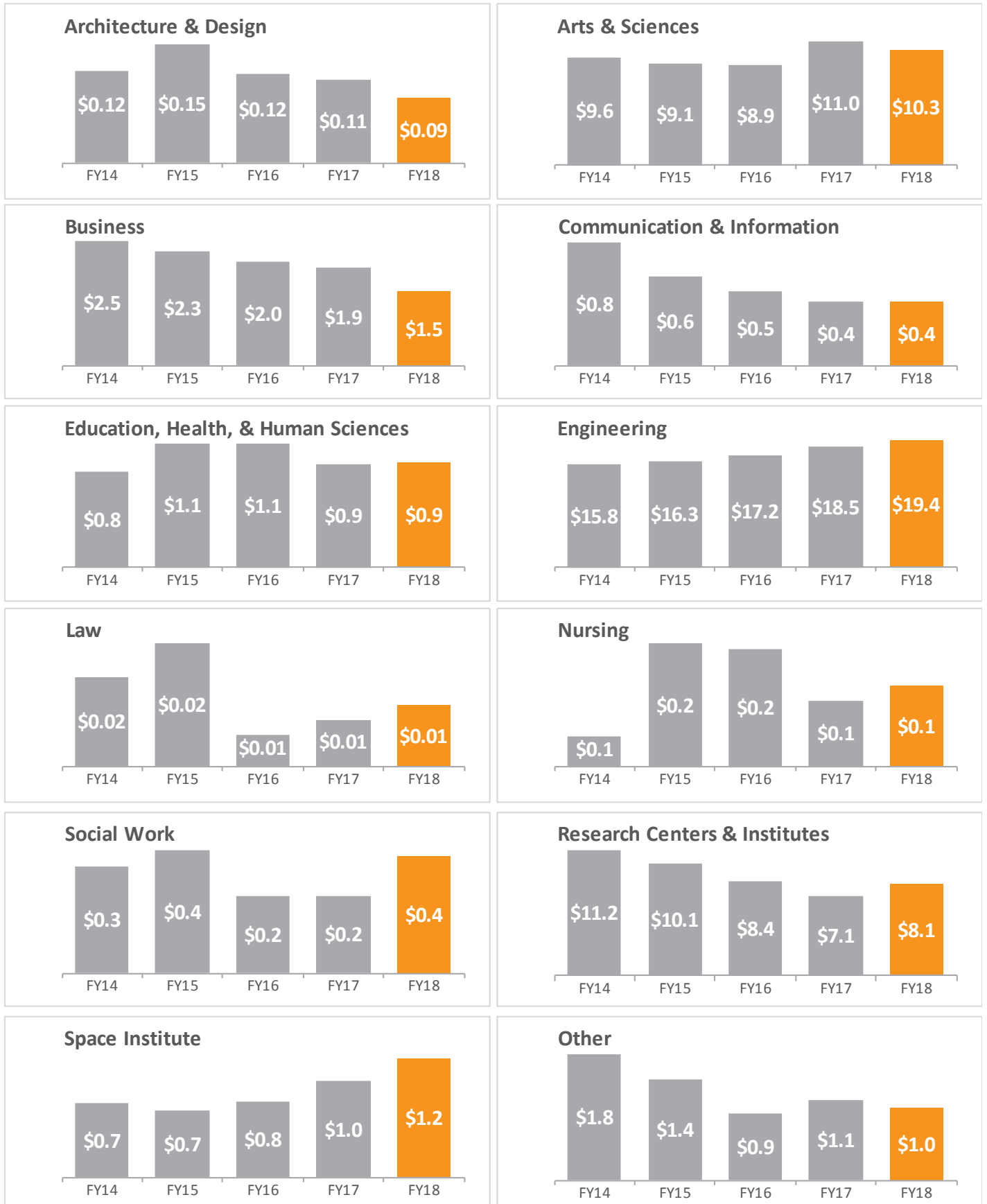
### AWARDED AMOUNT BY COLLEGE: FY14-FY18 Q1 (Figure 10)

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



### AMOUNT EXPENDED ON R&D BY COLLEGE: FY14-FY18 Q1 (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.

R&D expenditure data is collected from the "NSF Research Survey Estimate" report provided by UT IRIS Data Warehouse. The data for this 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 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/>

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.

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 October 24th, 2017. The annual report will represent the final amounts for that fiscal year.