

University of Tennessee
Office of Research & Engagement

Quarterly Research Activity Report Q3 FY19

Cumulative for July 1, 2018 – March 31, 2019



Maegen Rochner, a graduate student specializing in dendrochronology in the Department of Geography, is recreating a millennia of climate history one tree at a time. Armed with a chainsaw, a face shield, and hiking boots, she climbs the landslides and avalanches of the Beartooth Mountains in Montana and Wyoming searching for her next potential sample. Rochner is one of the students profiled in the Office of Research and Engagement's series, [Graduate Student Spotlights](#).



THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

OFFICE OF RESEARCH &
ENGAGEMENT

A Message from the Interim VCR

UT showed an upward trend in federal award amounts with the US Department of Energy, US Department of Defense, and National Science Foundation showing continued stability through the first three quarters of fiscal year 2019 (Q1-Q3 FY19).

The university received the highest ever award amount from the DOE in Q1-Q3 FY19 as compared to the first three quarters of previous years. During this time, 68% of our award amount came from federal agencies and DOE contributed 51% or \$38.8 million.

The DOD award amount is up more than \$8 million, and increased 35% compared to the five-year average award amount. Expenditures for DOD increased by \$1.2 million, and up 24% compared to the five-year average.

All colleges along with UTSI are staying stable in the research expenditures spent through the first three quarters.

The College of Communication and Information Sciences (CCI), College of Social Work (SW), and College of Education, Health, and Human Sciences continued to see growth in total amount requested, award amount, and expenditures. The total amount requested by CCI is up 113%, and the award amount for SW is up \$2.6 million, or 93%, from their five-year averages. CCI has the highest total requested amount for their college in the last 10 years.



A handwritten signature in black ink, appearing to read 'R. Nobles', with a long horizontal flourish extending to the right.

Robert Nobles

Interim Vice Chancellor for Research

PROPOSALS, AWARDS, & R&D EXPENDITURES: FY19 Q1-Q3 vs FY18 Q1-Q3 (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	3	-25%	\$80,240	-72%	3	-40.0%	\$198,473	-32%	\$1,094,514	18%
College of Arts & Sciences	305	-18%	\$89,129,193	-8%	248	-13.6%	\$21,203,253	-14%	\$47,534,550	3%
Haslam College of Business	17	-26%	\$1,596,612	-60%	16	-23.8%	\$2,134,132	-21%	\$9,122,763	6%
College of Communication & Information	23	53%	\$8,725,631	317%	11	0.0%	\$1,711,852	15%	\$2,823,560	9%
College of Education, Health, & Human Sciences	78	24%	\$39,563,587	86%	38	26.7%	\$7,762,791	36%	\$6,159,776	2%
Tickle College of Engineering	493	-2%	\$149,209,913	-17%	471	10.3%	\$48,962,224	-9%	\$59,622,642	2.3%
College of Law	3	200%	\$298,946	2235%	0	-100.0%	\$0	N/C*	\$1,500,204	21%
College of Nursing	19	19%	\$6,922,616	-36%	13	160.0%	\$1,491,581	1708%	\$1,613,725	44%
College of Social Work	37	42%	\$22,011,444	137%	23	0.0%	\$5,219,798	103%	\$1,387,402	55%
Research Centers & Institutes	215	-7%	\$46,717,871	-62%	254	-8.3%	\$15,150,233	17%	\$18,401,807	-31%
UT Space Institute	28	-26%	\$7,457,400	-6%	25	-24.2%	\$2,698,576	-36%	\$3,310,257	-2%
Other ²	10	-9%	\$1,262,188	-16%	24	14.3%	\$5,660,036	-17%	\$3,162,649	-16%
Total	1,231	-5%	\$372,975,641	-18%	1,126	-1%	\$112,192,948	-3%	\$155,733,849	-2%

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

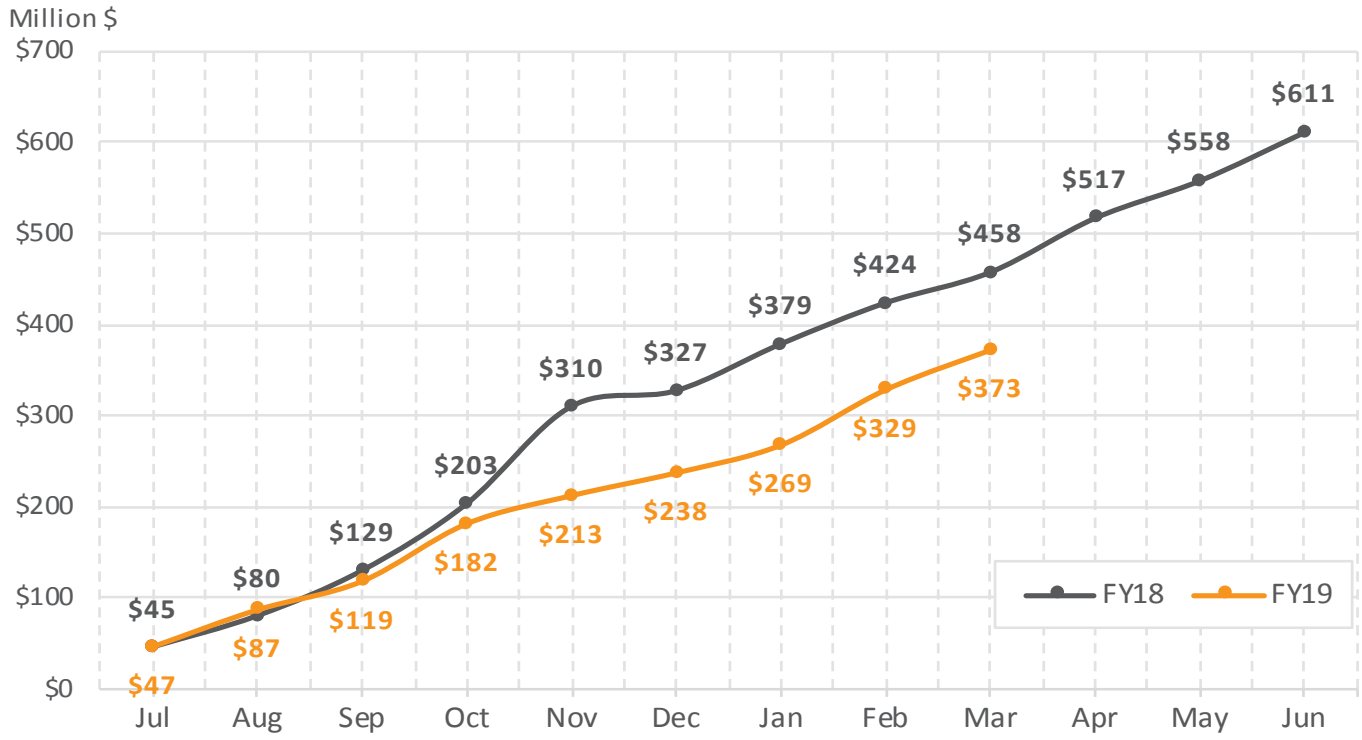
* N/C - Not Calculable

TOP 10 NEW PROJECTS: FY19 Q1-Q3 (Table 2)

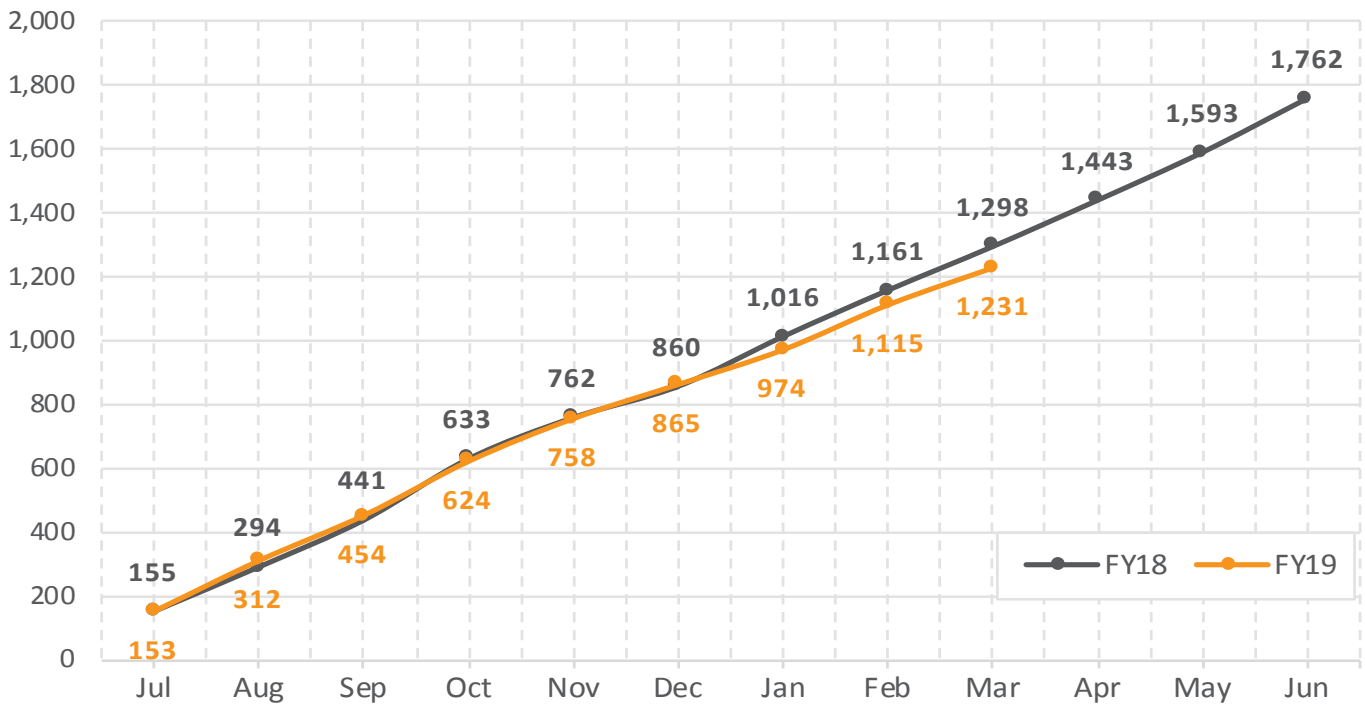
(by total anticipated dollar value)

Investigators (Primary PI First)	Award Admin Dept	PI Home Department	Project Title	Anticipated Amount	Sponsor	Activity Type	Project Begins	Project Ends
Raynor, Hollie; Crouter, Scott	Nutrition	Nutrition; Kinesiology Rec & Sport Studies	Translating basic habituation research to childhood obesity treatment	\$2,757,353	NIH - National Institute of Diabetes & Digestive & Kidney Diseases	Basic Research	3/1/2019	3/31/2024
Blackwell, Michael; Bruce, Donald; Brown, Kathleen; Nugent, William; Daugherty, Linda	Office of Rsch & Public Service	Ctr for Behavioral Health Rsch; Boyd Ctr for Business & Econ Rsch; Office of Rsch & Publ Service; Publ Health; Social Work	AlignCare	\$2,633,420	Maddie's Fund	Basic Research	7/26/2018	6/30/2021
Rose, Garrett; Dean, Mark; Plank, James	Electrical Engr & Computer Science	EECS; College of Engr	Design Approaches for Efficient Reconfigurable Neuromorphic Systems	\$1,546,582	DOD - Air Force Research Laboratory	Basic Research	2/13/2019	2/12/2022
Lindley, Lisa	Nursing	Nursing	Effectiveness of concurrent care to improve pediatric and family outcomes at end of life	\$1,526,304	NIH - National Institute of Nursing Research	Basic Research	8/1/2018	6/30/2022
Babu, Sudarsanam	MABE	MABE	Rationalization of Liquid/Solid and Solid/Solid Interphase Instabilities	\$1,500,000	DOD - Office of Naval Research	Basic Research	8/1/2018	5/31/2023
Zhang, Feng	UTSI MABE Program	UTSI MABE Program	Developing novel electrodes with ultralow catalyst loading for high-efficiency hydrogen production	\$1,399,997	DOE - The Office of Energy Efficiency & Renewable Energy	Basic Research	10/1/2018	9/30/2020
Lukosi, Eric	JIAM	Nuclear Engr	A State-of-the-Art Neutron Imaging Sensor for DOE User Facilities	\$1,199,986	DOE - Office of Basic Energy Sciences	Applied Research	9/1/2018	8/31/2021
Schmisser, John; Balas, Mark	UTSI MABE Program	UTSI MABE Program; UTSI MABE Program	ARDVARC: the Aero Response to Deformable Vehicle Architectures Research Collaboration	\$1,147,922	DOD - Air Force Research Laboratory	Applied Research	11/20/2018	11/19/2021
Mannik, Jaan; Mannik, Jaana	Physics	Physics; BCMB	Coordination mechanisms between cell division and chromosome segregation	\$1,143,406	NIH - National Institute of General Medical Sciences	Basic Research	9/1/2018	7/31/2022
Hillyer, Sarah	Ctr for Sport, Peace, & Society	Ctr for Sport, Peace, & Society	Better World: Empowering Global Change Agents through Sports	\$1,140,000	Dept of State	Public Service	9/19/2018	12/31/2019

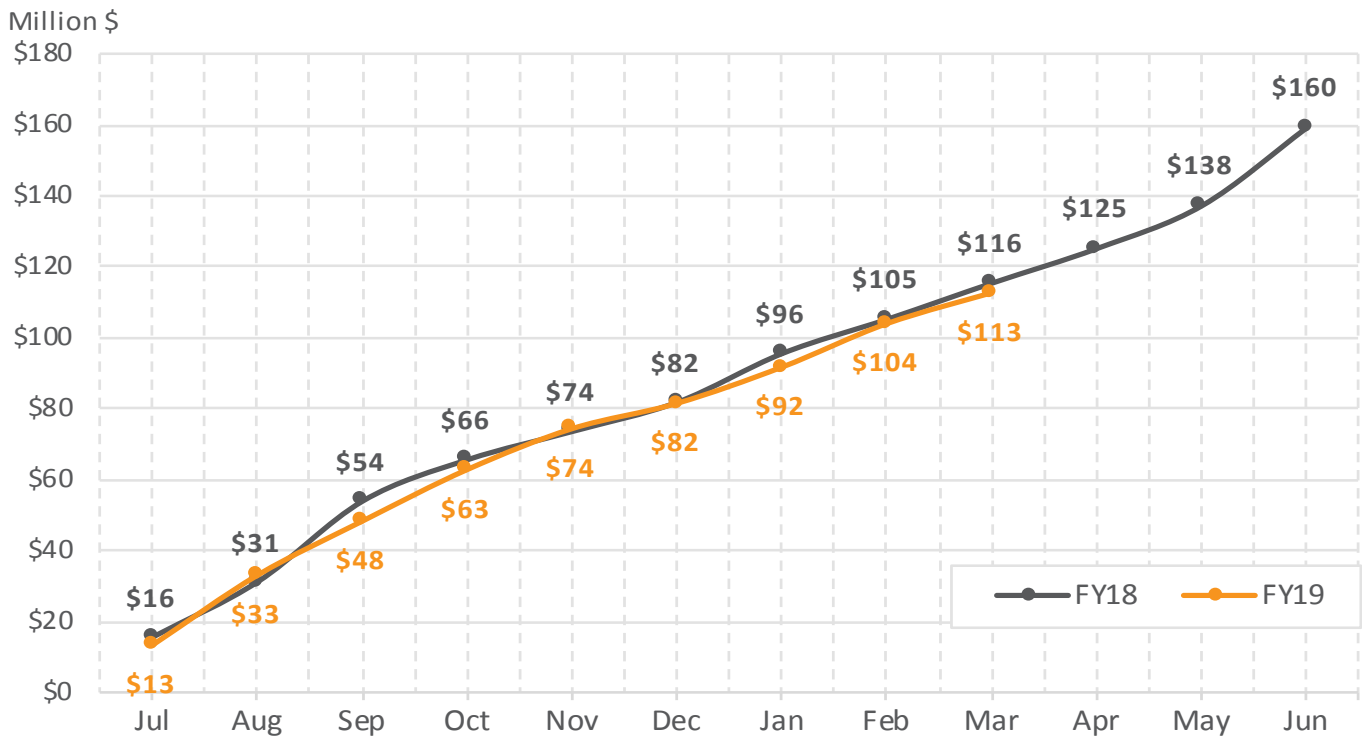
CUMULATIVE PROPOSAL AMOUNT: FY19 vs. FY18 (Figure 1)



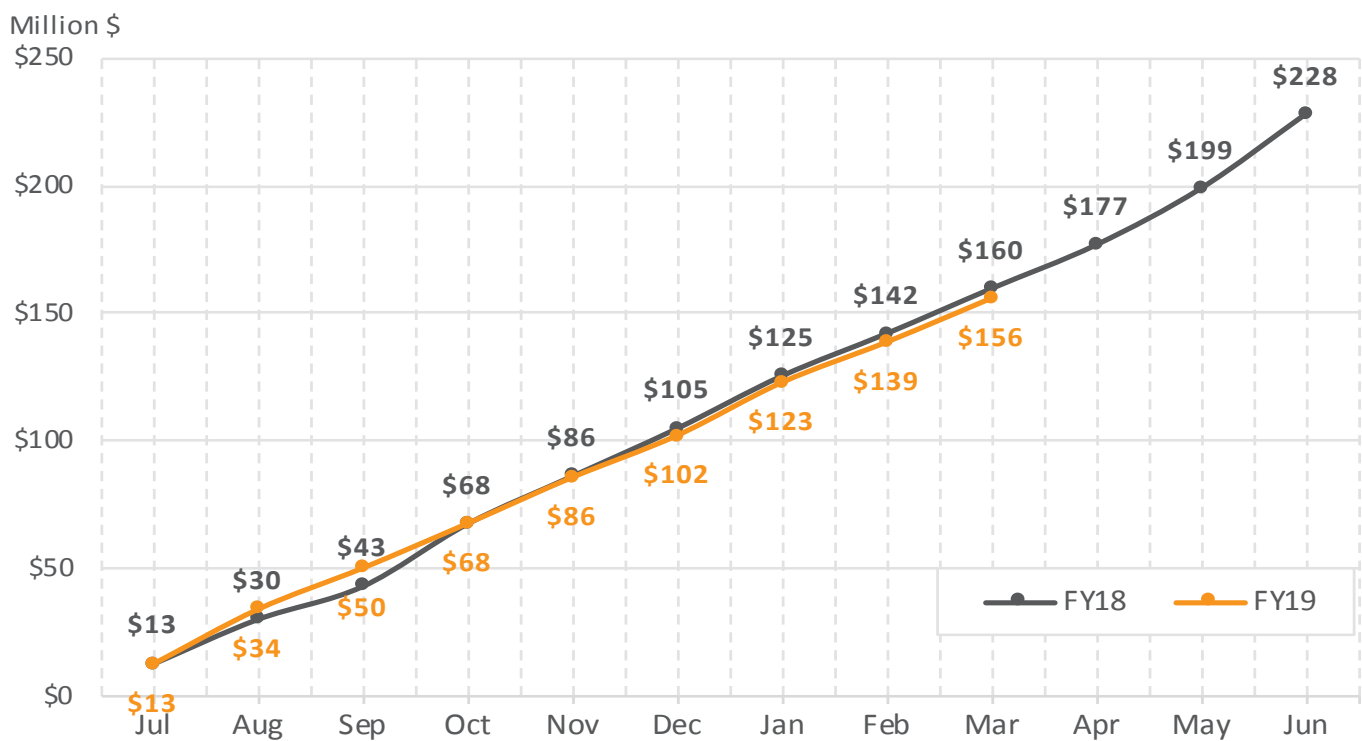
CUMULATIVE PROPOSAL COUNT: FY19 vs. FY18 (Figure 2)



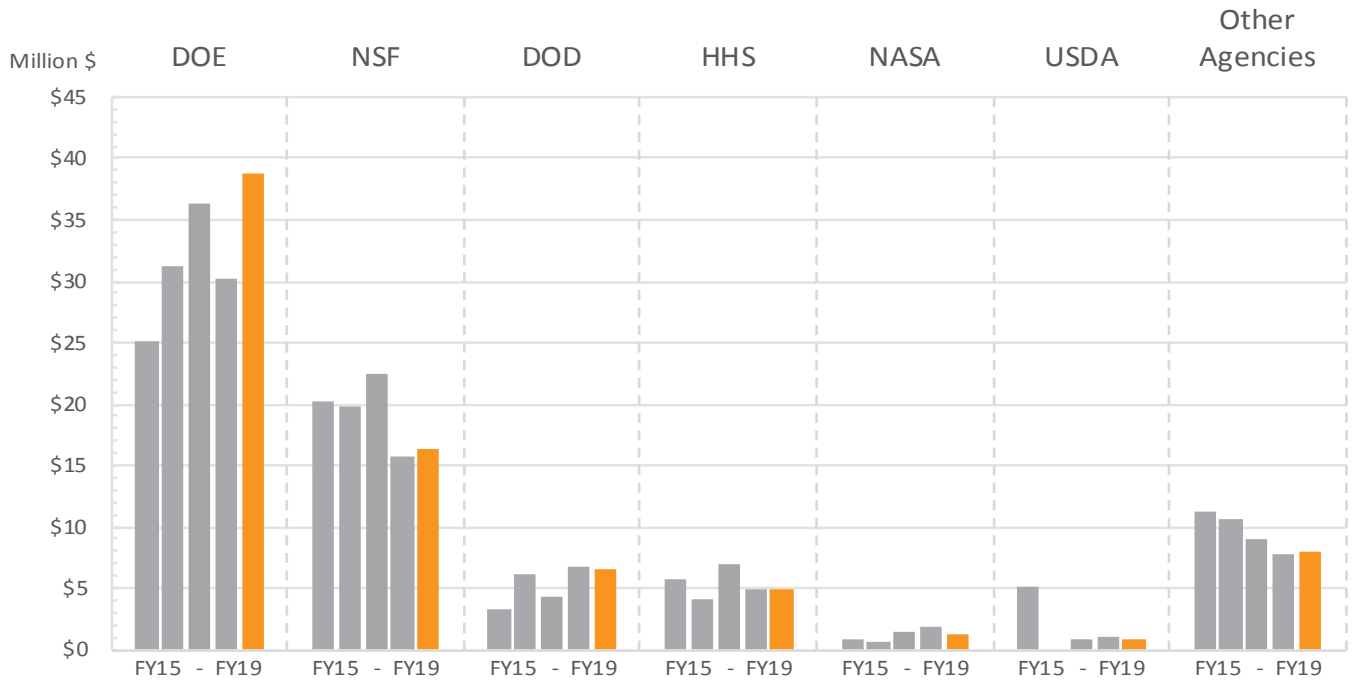
CUMULATIVE AWARD AMOUNT: FY19 vs. FY18 (Figure 3)



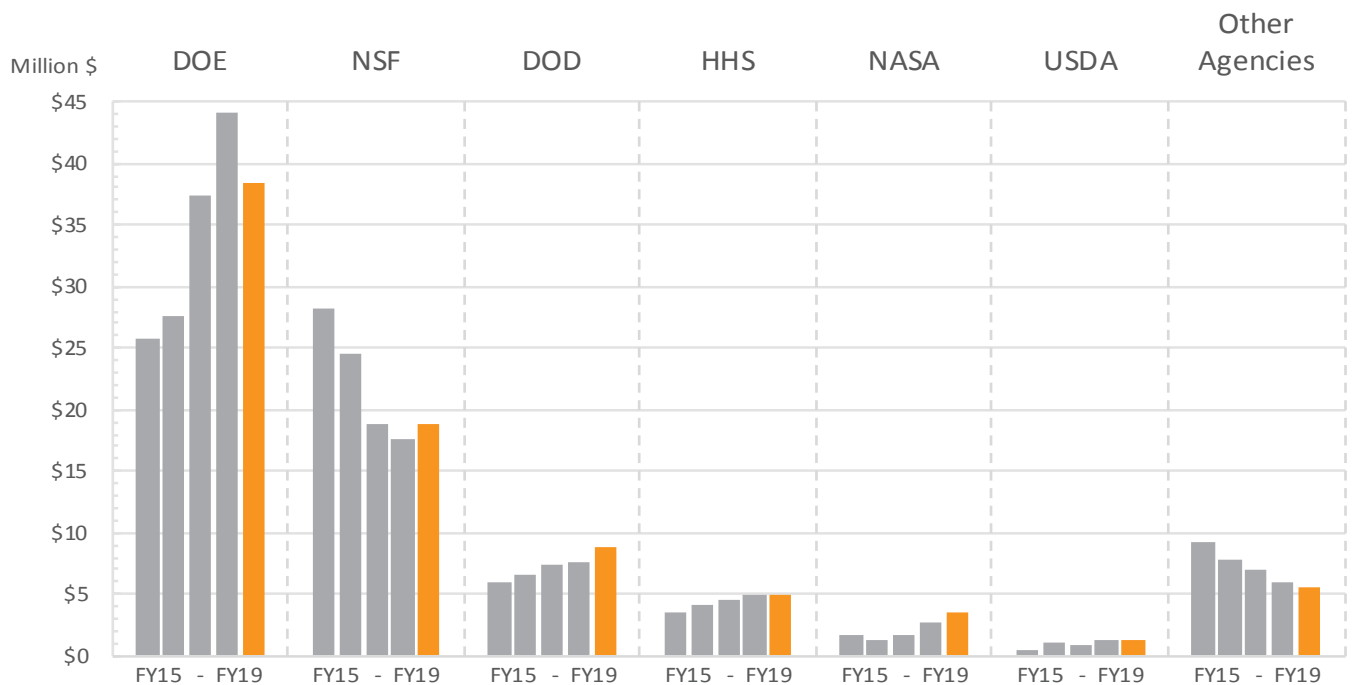
CUMULATIVE AMOUNT EXPENDED ON R&D: FY19 vs. FY18 (Figure 4)



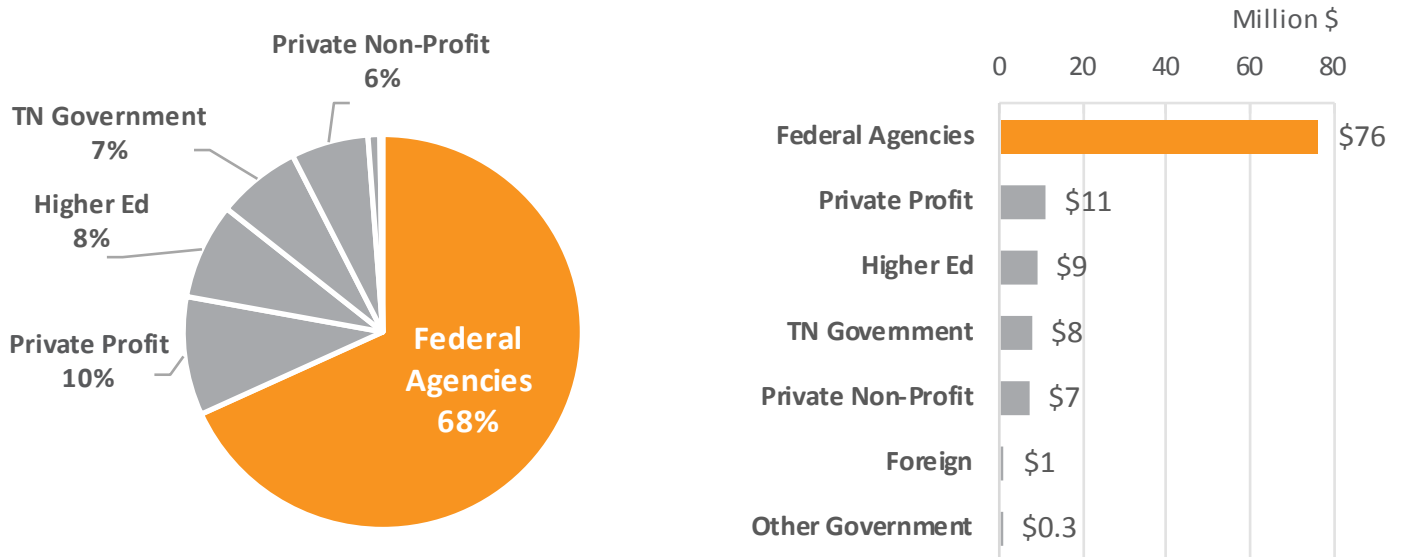
AWARDED DOLLARS BY FEDERAL AGENCY: FY15-FY19 Q1-Q3 (Figure 5)



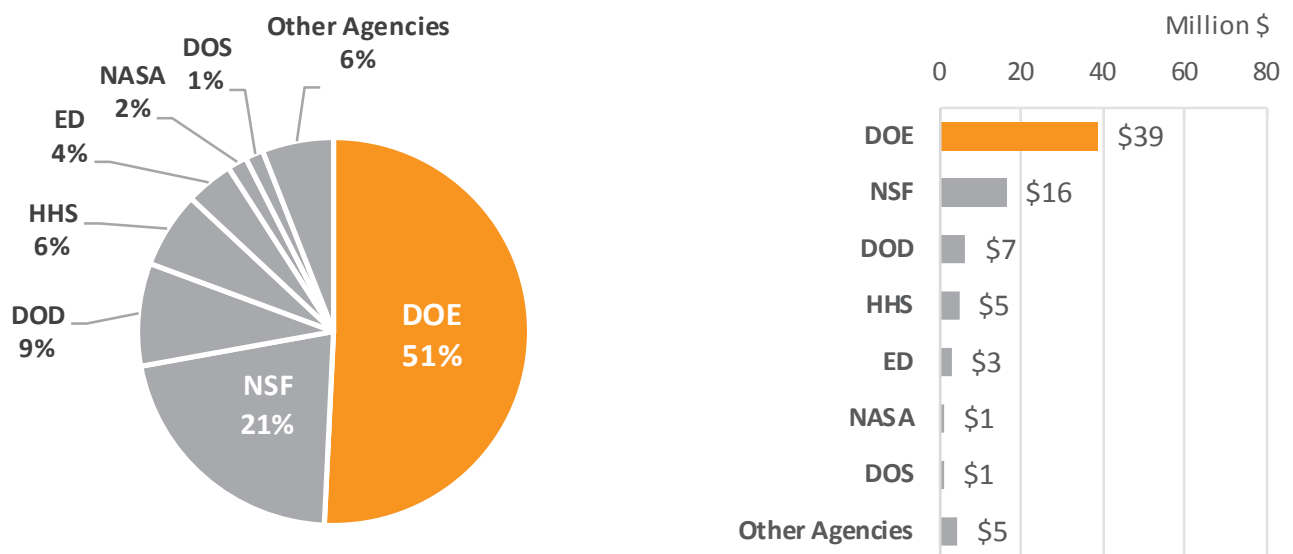
R&D EXPENDITURES BY FEDERAL AGENCY: FY15-FY19 Q1-Q3 (Figure 6)



AWARDED DOLLARS BY SOURCE: FY19 Q1-Q3 (Figure 7)

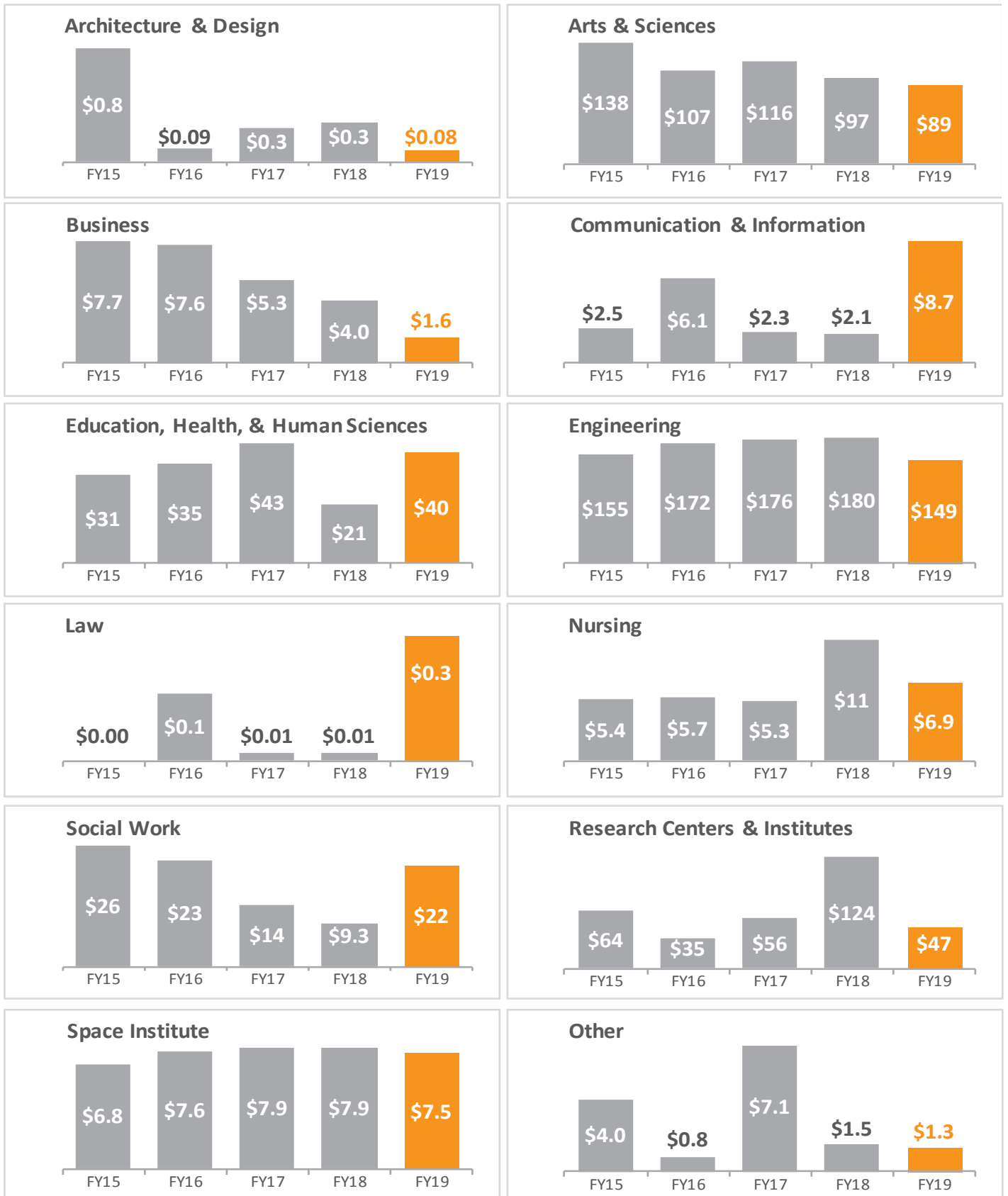


FEDERAL AWARDED DOLLARS BY AGENCY: FY19 Q1-Q3 (Figure 8)



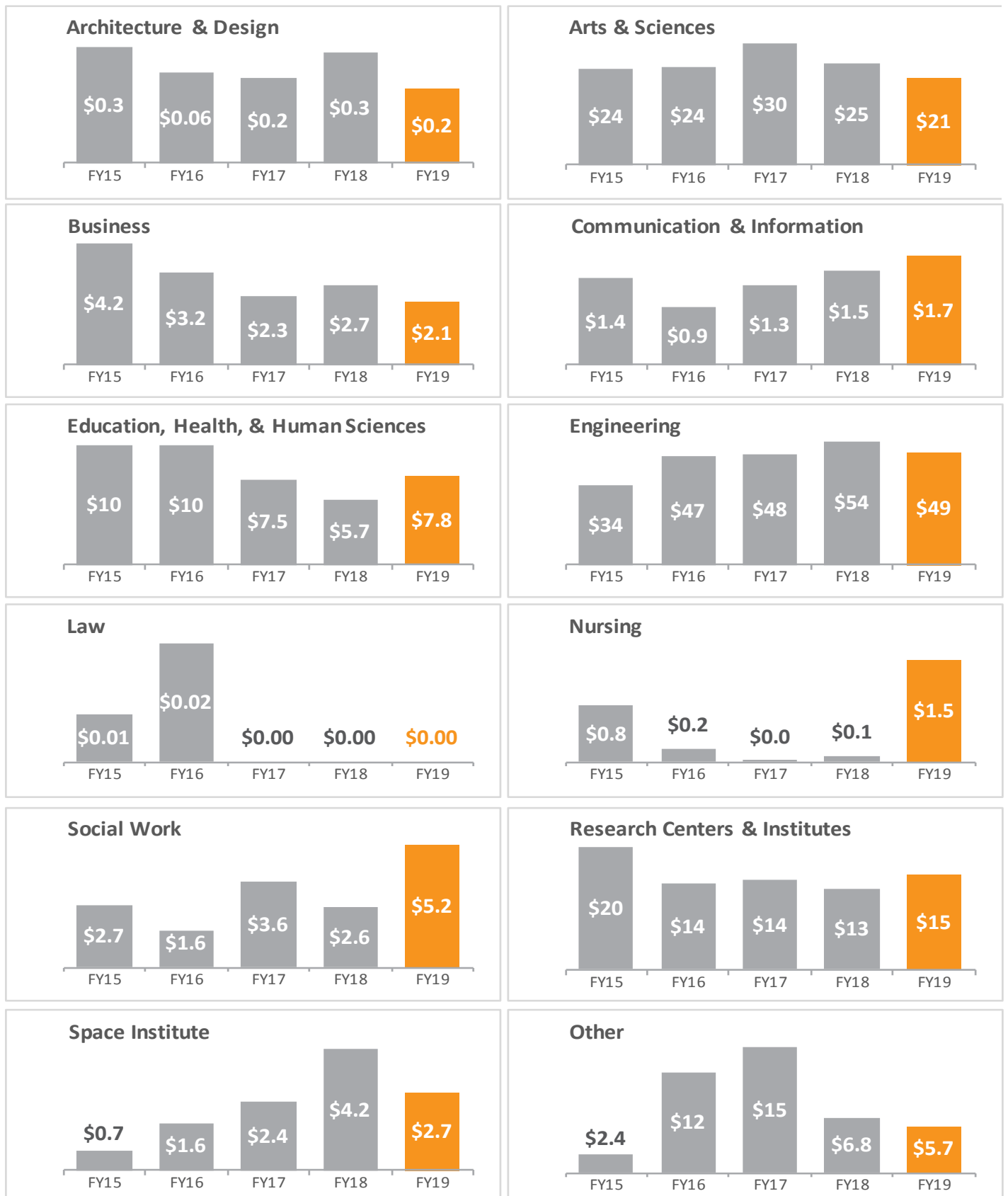
PROPOSED AMOUNT BY COLLEGE: FY15-FY19 Q1-Q3 (Figure 9)

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



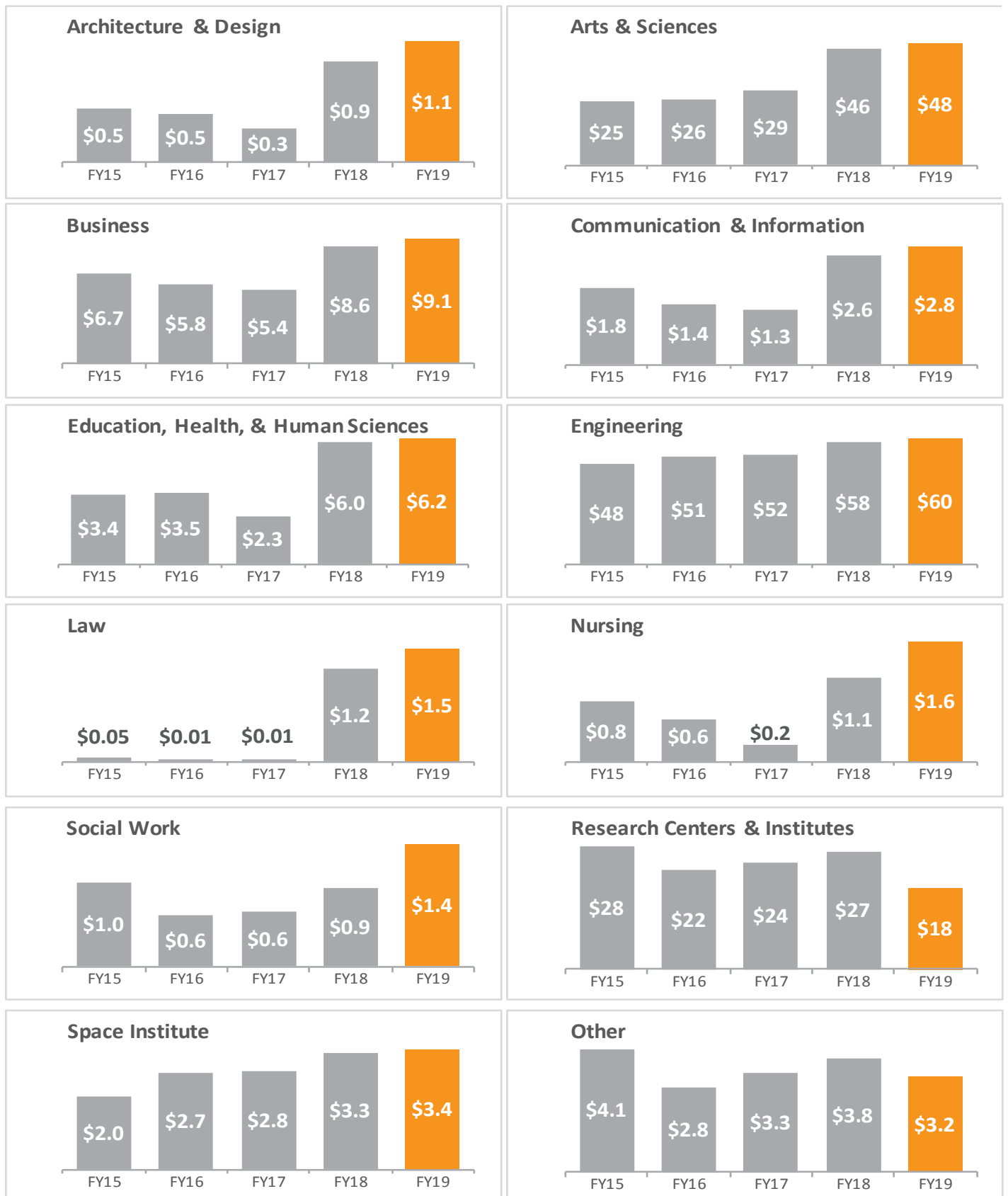
AWARDED AMOUNT BY COLLEGE: FY15-FY19 Q1-Q3 (Figure 10)

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



AMOUNT EXPENDED ON R&D BY COLLEGE: FY15-FY19 Q1-Q3 (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 April 9th, 2019. The annual report will represent the final amounts for that fiscal year.