



WPI

WORCESTER POLYTECHNIC INSTITUTE

REPORT OF SPONSORED PROGRAM ACTIVITY

for the period

July 1, 2015 to June 30, 2016

Prepared by the

Office of Sponsored Programs

(For WPI Use Only)

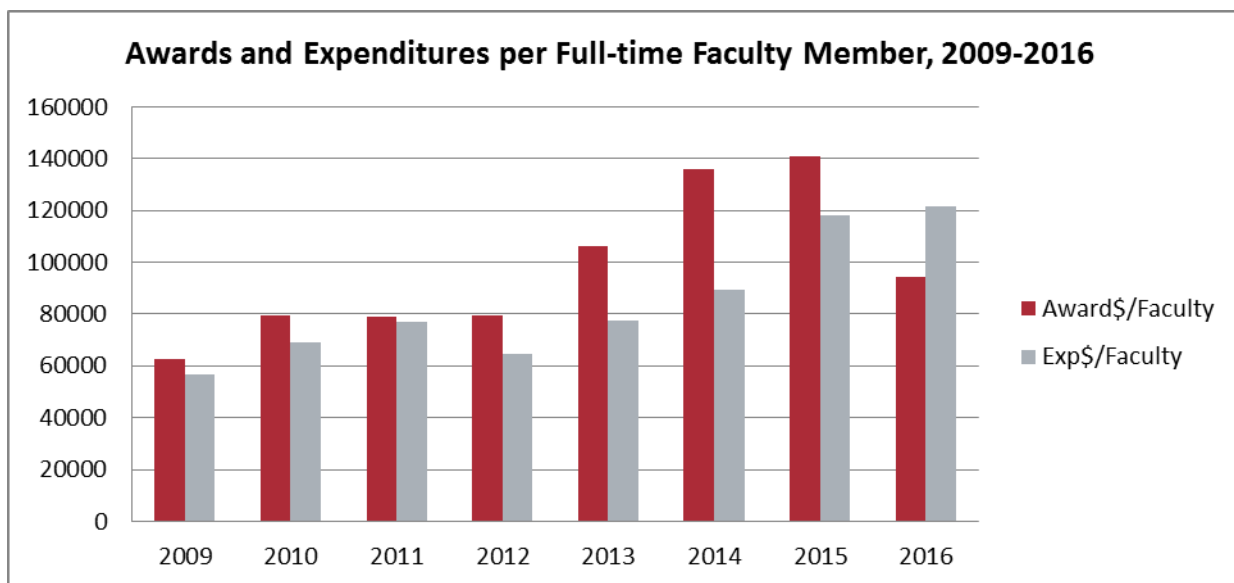
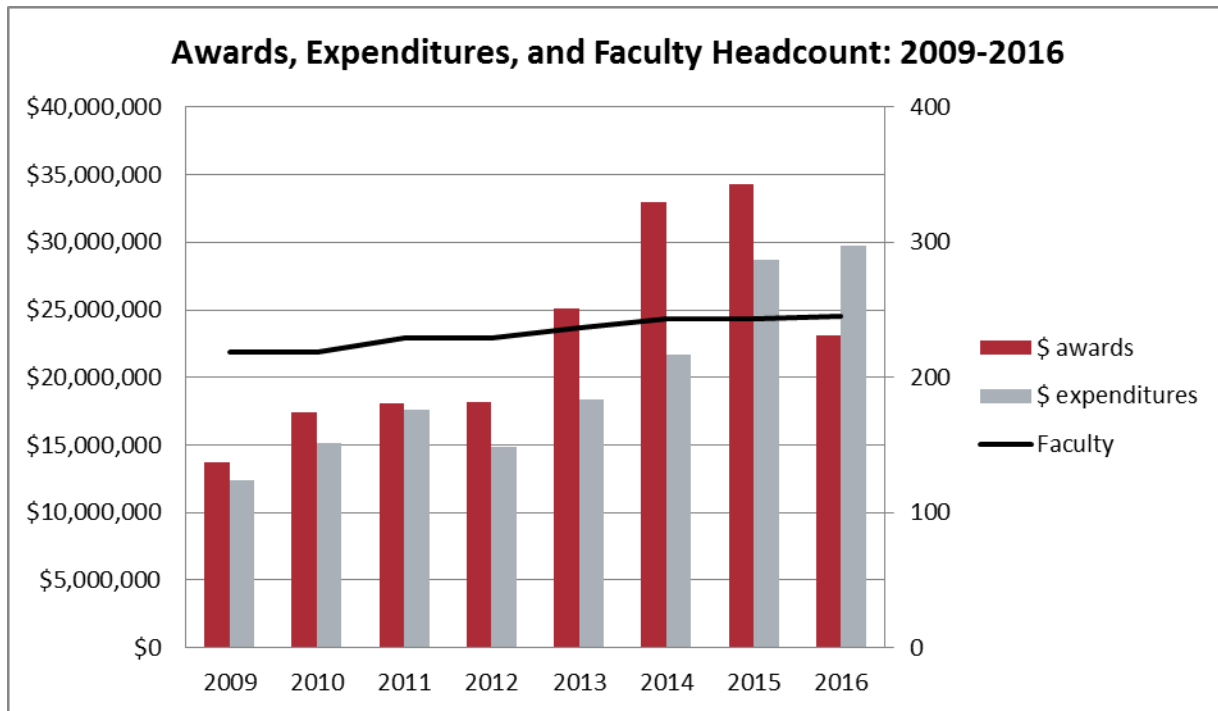
Introduction

This report, published annually by the Office of Sponsored programs, aims to provide a summary of key data related to WPI's extramural funding activities, including proposals submitted, awards received, and funds expended.

As with prior years, this report includes only those proposals and awards administered by OSP. Proposals and awards that are exclusively the purview of the University Institutional Advancement Office, the Projects Program, or other University offices, are not included here. Every effort has been made to ensure the accuracy of data presented, but should any errors be noted, please let us know so that we may make corrections to the report.

We welcome your feedback on this report. Comments and suggestions can be submitted via e-mail to Gabe Johnson, Associate Director, Post-Award & Compliance (gjohnson@wpi.edu).

1. Selected Historical Data



2. Summary of Sponsored Programs Activity

2.1: Awards, Proposals and Expenditures by Dean/Department

Worcester Polytechnic Institute
Comparative Summary of Sponsored Program Activity by Department
Fiscal Years 2016 and 2015

Department	Award Actions Received				Proposals Submitted				Expenditures	
	FY 2016		FY 2015		FY 2016		FY 2015		FY 2016	FY 2015
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	Amount	Amount
Arts & Sciences										
Biology & Biotechnology	30	\$ 1,213,770	22	\$ 750,431	25	\$ 16,664,582	27	\$ 8,354,793	\$ 721,690	\$ 741,142
Chemistry & Biochemistry	7	\$ 1,573,880	3	\$ 952,745	23	\$ 14,031,454	22	\$ 22,931,924	\$ 1,103,730	\$ 546,937
Computer Science	24	\$ 3,896,366	29	\$ 5,631,371	63	\$ 90,931,859	53	\$ 49,143,664	\$ 3,652,269	\$ 4,433,050
Humanities & Arts	1	\$ 199,988	1	\$ 7,000	6	\$ 2,801,271	6	\$ 2,897,787	\$ 146,727	\$ 75,509
Mathematical Sciences	9	\$ 1,057,195	13	\$ 1,093,731	31	\$ 7,138,020	38	\$ 12,712,225	\$ 1,039,508	\$ 933,560
Physics	4	\$ 610,200	6	\$ 1,370,808	15	\$ 6,972,843	7	\$ 2,430,054	\$ 644,059	\$ 560,110
Social Science & Policy Studies	4	\$ 79,740	3	\$ 550,275	19	\$ 9,874,384	14	\$ 7,301,952	\$ 598,631	\$ 1,114,124
Total	79	\$ 8,631,139	77	\$ 10,356,361	182	\$ 148,414,413	167	\$ 105,772,399	\$ 7,906,614	\$ 8,404,432
Business										
	19	\$ 503,715	7	\$ 731,542	11	\$ 2,737,718	11	\$ 5,471,336	\$ 869,469	\$ 519,254
Engineering										
Biomedical Engineering	14	\$ 3,700,807	14	\$ 2,647,996	36	\$ 20,566,371	33	\$ 42,112,913	\$ 2,470,921	\$ 1,899,167
Chemical Engineering	14	\$ 1,498,354	7	\$ 1,122,791	29	\$ 7,359,639	21	\$ 12,759,470	\$ 2,288,013	\$ 2,372,223
Civil & Environmental Engineering	4	\$ 113,536	8	\$ 450,331	22	\$ 8,108,378	22	\$ 10,595,603	\$ 449,917	\$ 519,702
Electrical & Computer Engineering	18	\$ 1,858,977	25	\$ 1,830,807	30	\$ 10,289,038	37	\$ 10,903,541	\$ 2,244,793	\$ 2,003,196
Fire Protection Engineering	6	\$ 1,432,039	6	\$ 1,719,369	5	\$ 627,926	8	\$ 4,022,746	\$ 1,843,295	\$ 1,062,050
Mechanical Engineering	29	\$ 4,619,070	36	\$ 14,477,518	68	\$ 23,943,163	67	\$ 46,747,256	\$ 10,518,486	\$ 11,357,304
Total	85	\$ 13,222,783	96	\$ 22,248,812	190	\$ 70,894,515	188	\$ 127,141,529	\$ 19,815,425	\$ 19,213,642
Interdisciplinary & Global Studies										
	1	\$ 61,214	1	\$ 65,948	1	\$ 91,000	3	\$ 425,213	\$ 80,344	\$ 162,353
Other										
	8	\$ 670,683	13	\$ 880,649	7	\$ 2,181,781	10	\$ 2,217,911	\$ 1,062,239	\$ 364,233
University Total	192	\$ 23,089,534	194	\$ 34,283,312	391	\$ 224,319,427	379	\$ 241,028,388	\$ 29,734,091	\$ 28,663,914

2.2: Summary of FY2016 Activity (with comparative data for FY2015)

	<u>FY2016</u>	<u>FY2015</u>	<u>% Change</u>
Number of Proposal Submissions	391	379	3.2%
\$ Composition of Proposals Submitted			
Direct Costs	\$ 177,705,253	\$ 187,989,143	-5.5%
Indirect Costs	<u>\$ 47,559,900</u>	<u>\$ 51,838,664</u>	-8.3%
Total Requested	\$ 241,028,388	\$ 241,028,388	0.0%
Cost Sharing	<u>\$ 7,682,387</u>	<u>\$ 6,454,293</u>	19.0%
Total Project Costs Proposed	\$ 248,710,775	\$ 247,482,681	0.5%
Number of Award Actions	192	194	-1.0%
\$ Composition of Award Actions Received			
Direct Costs	\$ 18,519,786	\$ 28,899,264	-35.9%
Indirect Costs	<u>\$ 4,569,928</u>	<u>\$ 5,384,048</u>	-15.1%
Total Award \$ Received	\$ 23,089,714	\$ 34,283,312	-32.7%
Cost Sharing	<u>\$ 4,117,207</u>	<u>\$ 1,639,231</u>	151.2%
Total Project Costs	\$ 27,206,921	\$ 35,922,543	-24.3%
Selected Proposal Coordination Form (PCF) "Special Considerations" Summary Data:			
a. Proposals Involving Human Participants	53	65	-18.5%
b. Proposals Involving Use of Animals	19	15	26.7%
c. Proposals Involving Hazardous Materials	62	52	19.2%
d. Proposals Requesting Support for Research Assistants	261	249	4.8%
e. Proposals Requesting Support for Non-Student Personnel	37	68	-45.6%
f. Proposals Including Funds for Consultants/Subcontractor:	57	56	1.8%
g. Proposals with Academic Year Faculty Salary Budgeted	21	23	-8.7%
h. Proposals Requesting Equipment Funds	47	51	-7.8%

3. Proposal & Award Activity for Fiscal Year 2016

3.1: Awards by Dean/Department

Figure 3.1 below provides departmental data for award actions received in fiscal year 2015. It also includes summary information regarding indirect cost rates and cost sharing on awards (unaudited - for comparison purposes only) as well as a breakdown at the bottom of the report that shows total University award information and awards for STEM departments only.

“Awards” are defined as funds which have been actually obligated and released by the sponsor. Some grants are awarded in yearly increments, subject to satisfactory progress and/or availability of funds. In such cases, only those increments actually received by WPI are counted as awards.

Worcester Polytechnic Institute
Summary of Award Actions
July 1, 2015 to June 30, 2016

Dean	Department	Count	Direct Costs	Indirect Costs	Total Costs	Average	Average	Average Cost	CS	Excess IDC	
						Award			Effective		over CS
						Amount	Rate	Sharing	Rate		
Arts & Sciences	Biology S/R	30	\$ 908,012	\$ 305,758	\$ 1,213,770	\$ 40,459	33.7	\$ 121,320	\$ 4,044	10	\$ 184,438
	Chemistry S/R	7	\$ 1,139,166	\$ 434,714	\$ 1,573,880	\$ 224,840	38.2				\$ 434,714
	Computer Science S/R	24	\$ 3,002,150	\$ 894,216	\$ 3,896,366	\$ 162,349	29.8	\$ 110,362	\$ 4,598	2.8	\$ 783,854
	Humanities S/R	1	\$ 164,525	\$ 35,463	\$ 199,988	\$ 199,988	21.6				\$ 35,463
	Math S/R	9	\$ 799,195	\$ 258,000	\$ 1,057,195	\$ 117,466	32.3	\$ 12,100	\$ 1,344	1.1	\$ 245,900
	Physics S/R	4	\$ 510,769	\$ 99,431	\$ 610,200	\$ 152,550	19.5				\$ 99,431
	Social Science S/R	4	\$ 77,460	\$ 2,280	\$ 79,740	\$ 19,935	2.9	\$ 19,665	\$ 4,916	24.7	\$ (17,385)
	Total	79	\$ 6,601,277	\$ 2,029,862	\$ 8,631,139	\$ 109,255	30.7	\$ 263,447	\$ 3,335	3.1	\$ 1,766,415
Engineering	Biomedical S/R	14	\$ 3,218,787	\$ 482,020	\$ 3,700,807	\$ 264,343	15	\$ 2,154,765	\$ 153,912	58.2	\$ (1,672,745)
	Chem Eng S/R	14	\$ 1,094,140	\$ 404,214	\$ 1,498,354	\$ 107,025	36.9	\$ 73,016	\$ 5,215	4.9	\$ 331,198
	Civil & Environmental Eng S/R	4	\$ 106,991	\$ 6,545	\$ 113,536	\$ 28,384	6.1	\$ 19,665	\$ 4,916	17.3	\$ (13,120)
	ECE S/R	18	\$ 1,664,696	\$ 194,281	\$ 1,858,977	\$ 103,277	11.7	\$ 348,159	\$ 19,342	18.7	\$ (153,878)
	Fire Protection S/R	6	\$ 1,074,464	\$ 357,575	\$ 1,432,039	\$ 238,673	33.3	\$ 26,289	\$ 4,382	1.8	\$ 331,286
	ME S/R	29	\$ 3,710,108	\$ 908,962	\$ 4,619,070	\$ 159,278	24.5	\$ 750,634	\$ 25,884	16.3	\$ 158,328
	Total	85	\$ 10,869,186	\$ 2,353,597	\$ 13,222,783	\$ 155,562	21.7	\$ 3,372,528	\$ 39,677	25.5	\$ (1,018,931)
IGSD	IGSD - S/R	1	\$ 38,990	\$ 22,224	\$ 61,214	\$ 61,214	57				\$ 22,224
Other		8	\$ 621,818	\$ 49,045	\$ 670,863	\$ 83,858	7.9	\$ 478,232	\$ 59,779	71.3	\$ (429,187)
School of Business	School of Business S/R	19	\$ 388,515	\$ 115,200	\$ 503,715	\$ 26,511	29.7				\$ 115,200
University Total		192	\$ 18,519,786	\$ 4,569,928	\$ 23,089,714	\$ 120,259	24.7	\$ 4,114,207	\$ 21,428	17.8	\$ 455,721
STEM Departments		163	\$ 17,305,938	\$ 4,347,996	\$ 21,653,934	\$ 132,846	25.2	\$ 3,635,975	\$ 22,307	16.4	\$ 712,021

3.2: Awards by Sponsor

**Worcester Polytechnic Institute
Comparative Summary of Awards by Sponsor
FY 2016 and FY 2015**

Sponsor	FY2016				FY2015			
	No.	%	\$ Amount	%	No.	%	\$ Amount	%
Federal								
Dept of Defense	27	14%	\$ 3,395,069	15%	23	12%	\$ 12,196,745	36%
Dept of Education	1	1%	\$ 295,278	1%	7	4%	\$ 1,943,878	6%
Dept of Energy	8	4%	\$ 1,438,368	6%	5	3%	\$ 474,750	1%
Dept of Homeland Security	1	1%	\$ 165,639	1%	3	2%	\$ 338,634	1%
Dept of Interior	2	1%	\$ 1,083,993	5%	3	2%	\$ 1,362,428	4%
DHHS	22	11%	\$ 3,876,500	17%	17	9%	\$ 4,542,532	13%
NASA	3	2%	\$ 121,226	1%	5	3%	\$ 268,975	1%
NSF	49	26%	\$ 6,844,663	30%	63	32%	\$ 8,592,176	25%
Nuclear Regulatory Commission	1	1%	\$ 199,736	1%	4	2%	\$ 1,160,726	3%
USDA	3	2%	\$ 240,779	1%	1	1%	\$ 122,401	0%
VA	2	1%	\$ 170,097	1%	4	2%	\$ 440,393	1%
Other Federal	4	2%	\$ 147,599	1%	3	2%	\$ 38,167	0%
<i>Subtotal - Federal</i>	<i>123</i>	<i>64%</i>	<i>\$ 17,978,947</i>	<i>78%</i>	<i>138</i>	<i>71%</i>	<i>\$ 31,481,805</i>	<i>92%</i>
Commonwealth of Massachusetts	16	8%	\$ 432,398	2%	3	2%	\$ 164,482	0%
Corporation	29	15%	\$ 1,783,193	8%	28	14%	\$ 929,544	3%
Foreign Organization	1	1%	\$ 34,500	0%	5	3%	\$ 511,664	1%
Foundation	9	5%	\$ 2,173,833	9%	15	8%	\$ 954,940	3%
Private Organization (univ, assoc)	11	6%	\$ 485,670	2%	4	2%	\$ 200,978	1%
Public Organization (local govt)	3	2%	\$ 201,173	1%	1	1%	\$ 39,899	0%
<i>Subtotal - Non-Federal</i>	<i>69</i>	<i>36%</i>	<i>\$ 5,110,767</i>	<i>22%</i>	<i>56</i>	<i>29%</i>	<i>\$ 2,801,507</i>	<i>8%</i>
Grand Total	192		\$ 23,089,714		194		\$ 34,283,312	

Figure 3.3: FY2016 Award \$ by Sponsor Type

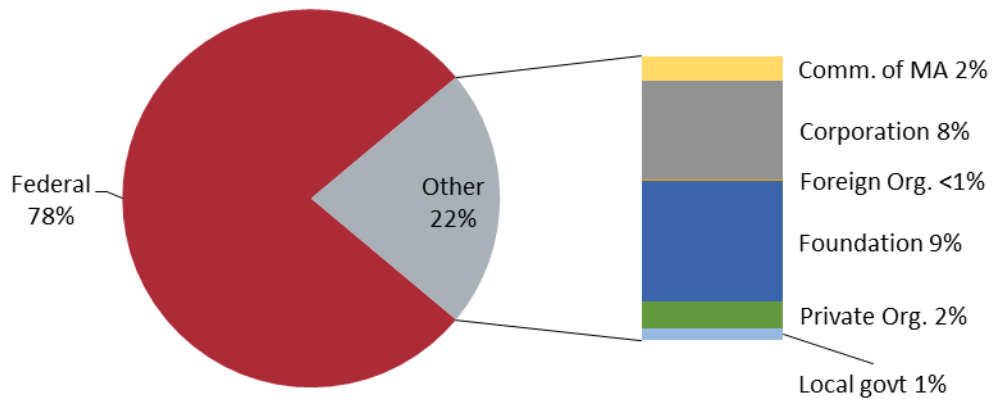
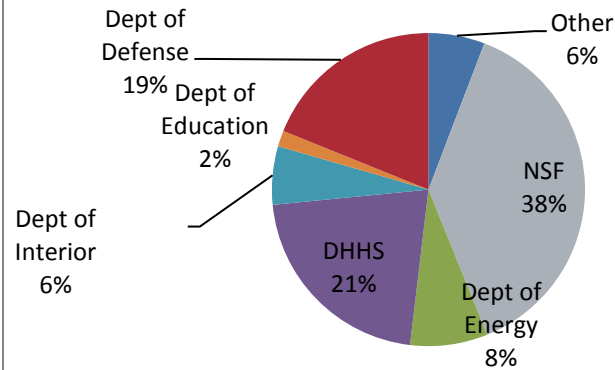


Figure 3.4: Federal Award \$ by Sponsor, FY2016



3.5 Proposals by Dean/Department

Figure 3.5 below provides a departmental summary of proposal submission statistics for fiscal year 2015. This summary includes information about requested direct and indirect costs, average proposal amounts and indirect cost rates requested, and cost sharing on proposal submissions. There are totals shown at the bottom of the schedule for both the entire University and for STEM departments only.

**Worcester Polytechnic Institute
Summary of Proposals
July 1, 2015 to June 30, 2016**

<u>Dean</u>	<u>Department</u>	<u>Count</u>	<u>Direct Costs</u>	<u>Indirect Costs</u>	<u>Total Costs</u>	<u>Average Proposal Amount</u>	<u>Average IDC Rate</u>	<u>Cost Sharing</u>	<u>Average Cost Sharing Rate</u>	<u>CS Effective Rate</u>	<u>Excess IDC over CS</u>
Arts & Sciences											
	Biology S/R	25	\$ 12,815,157	\$ 3,849,424	\$ 16,664,582	\$ 666,583	30	\$ 344,802	\$ 38,311	2.1	\$ 3,504,622
	Chemistry S/R	23	\$ 10,191,849	\$ 3,839,607	\$ 14,031,454	\$ 610,063	37.7	\$ 298,742	\$ 59,748	2.1	\$ 3,540,865
	Computer Science S/R	63	\$ 77,645,847	\$ 13,286,010	\$ 90,931,859	\$ 1,443,363	17.1	\$ 423,463	\$ 60,495	0.5	\$ 12,862,547
	Humanities S/R	6	\$ 1,977,488	\$ 823,786	\$ 2,801,271	\$ 466,879	41.7	\$ 48,485	\$ 48,485	1.7	\$ 775,301
	Math S/R	31	\$ 5,094,218	\$ 2,043,802	\$ 7,138,020	\$ 230,259	40.1	\$ 116,911	\$ 19,485	1.6	\$ 1,926,891
	Physics S/R	15	\$ 5,113,754	\$ 1,859,089	\$ 6,972,843	\$ 464,856	36.4	\$ 269,768	\$ 89,923	3.9	\$ 1,589,321
	Social Science S/R	19	\$ 7,266,136	\$ 2,608,248	\$ 9,874,384	\$ 519,704	35.9	\$ 40,839	\$ 13,613	0.4	\$ 2,567,409
	Total	182	\$ 120,104,449	\$ 28,309,966	\$ 148,414,413	\$ 815,464	23.6	\$ 1,543,010	\$ 45,383	1.0	\$ 26,766,956
Engineering											
	Biomedical S/R	36	\$ 15,769,705	\$ 4,796,666	\$ 20,566,371	\$ 571,288	30.4	\$ 2,672,573	\$ 534,515	13	\$ 2,124,093
	Chem Eng S/R	29	\$ 5,168,133	\$ 2,191,506	\$ 7,359,639	\$ 253,781	42.4	\$ 73,016	\$ 18,254	1	\$ 2,118,490
	Civil & Environmental Eng S/R	22	\$ 7,028,494	\$ 2,025,609	\$ 8,108,378	\$ 368,563	28.8	\$ 1,312,632	\$ 164,079	16.2	\$ 712,977
	ECE S/R	30	\$ 7,734,636	\$ 2,554,402	\$ 10,289,038	\$ 342,968	33	\$ 598,111	\$ 99,685	5.8	\$ 1,956,291
	Fire Protection S/R	5	\$ 422,398	\$ 205,528	\$ 627,926	\$ 125,585	48.7	\$ -	\$ -		\$ 205,528
	ME S/R	68	\$ 17,544,638	\$ 6,398,524	\$ 23,943,163	\$ 352,105	36.5	\$ 813,677	\$ 101,710	3.4	\$ 5,584,847
	Total	190	\$ 53,668,004	\$ 18,172,235	\$ 70,894,515	\$ 373,129	33.9	\$ 5,470,009	\$ 176,452	7.7	\$ 12,702,226
	IGSD	1	\$ 57,962	\$ 33,038	\$ 91,000	\$ 91,000	57	\$ 35,168	\$ 35,168	38.6	\$ (2,130)
	Other	7	\$ 1,709,030	\$ 472,752	\$ 2,181,781	\$ 311,683	27.7	\$ 481,232	\$ 481,232	22.1	\$ (8,480)
	School of Business	11	\$ 2,165,808	\$ 571,909	\$ 2,737,718	\$ 248,883	26.4	\$ 152,968	\$ 50,989	5.6	\$ 418,941
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	University Total	391	\$ 177,705,253	\$ 47,559,900	\$ 224,319,427	\$ 573,707	26.8	\$ 7,682,387	\$ 19,648	3.4	\$ 39,877,513
	STEM Departments	367	\$ 171,852,927	\$ 45,691,453	\$ 216,598,657	\$ 590,187	26.6	\$ 6,999,702	\$ 19,073	3.2	\$ 38,691,751

3.6 Proposals by Sponsor

**Worcester Polytechnic Institute
Comparative Summary of Proposals by Sponsor
FY2016 and FY2015**

Sponsor	FY2016				FY2015			
	No.	%	No.	%	No.	%	No.	%
Federal								
Dept of Commerce	2	1%	\$ 1,001,625	0%	2	1%	\$ 10,299,692	4%
Dept of Defense	29	7%	\$ 7,077,776	3%	24	6%	\$ 38,547,693	16%
Dept of Education	3	1%	\$ 13,312,991	6%	6	2%	\$ 4,412,669	2%
Dept of Energy	13	3%	\$ 6,336,149	3%	13	3%	\$ 13,587,128	6%
Dept of Homeland Security	1	0%	\$ 165,639	0%	2	1%	\$ 1,646,003	1%
Dept of Interior	0	0%	\$ -	0%	1	0%	\$ 1,273,056	1%
DHHS	57	15%	\$ 92,042,651	41%	39	10%	\$ 36,575,363	15%
Dept of Transportatoin	2	1%	\$ 2,561,500	1%	0	0%	\$ -	0%
NASA	4	1%	\$ 852,662	0%	4	1%	\$ 983,257	0%
NEH	1	0%	\$ 38,834	0%	2	1%	\$ 118,851	0%
NSF	185	47%	\$ 87,936,666	39%	194	51%	\$ 122,681,794	51%
Nuclear Regulatory Commission	0	0%	\$ -	0%	0	0%	\$ -	0%
USDA	1	0%	\$ 147,964	0%	2	1%	\$ 219,638	0%
VA	2	1%	\$ 160,161	0%	4	1%	\$ 440,901	0%
Other Federal	10	3%	\$ 1,316,085	1%	5	1%	\$ 685,851	0%
<i>Subtotal - Federal</i>	<i>310</i>	<i>79%</i>	<i>\$ 212,950,703</i>	<i>95%</i>	<i>298</i>	<i>79%</i>	<i>\$ 231,471,896</i>	<i>96%</i>
						0%		0%
Commonwealth of Massachusetts	6	2%	\$ 436,720	0%	5	1%	\$ 754,654	0%
Corporation	21	5%	\$ 2,066,240	1%	20	5%	\$ 1,180,180	0%
Foreign Organization	6	2%	\$ 1,111,211	0%	6	2%	\$ 1,305,332	1%
Foundation	27	7%	\$ 5,316,235	2%	35	9%	\$ 3,208,315	1%
Private Organization (univ, assoc)	17	4%	\$ 2,174,268	1%	9	2%	\$ 567,550	0%
Public Organization (local govt)	4	1%	\$ 264,050	0%	1	0%	\$ 39,899	0%
<i>Subtotal - Non-Federal</i>	<i>81</i>	<i>21%</i>	<i>\$ 11,368,724</i>	<i>5%</i>	<i>76</i>	<i>20%</i>	<i>\$ 7,055,930</i>	<i>3%</i>
Grand Total	391		\$ 224,319,427		379		\$ 241,073,388	

Figure 3.7: FY2016 Proposal \$ by Sponsor Type

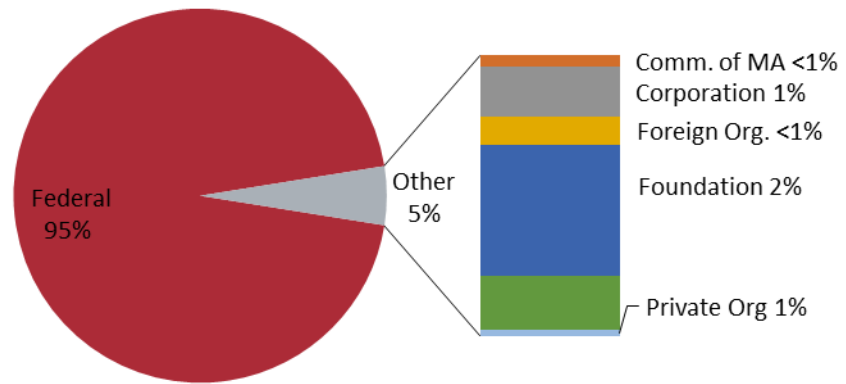
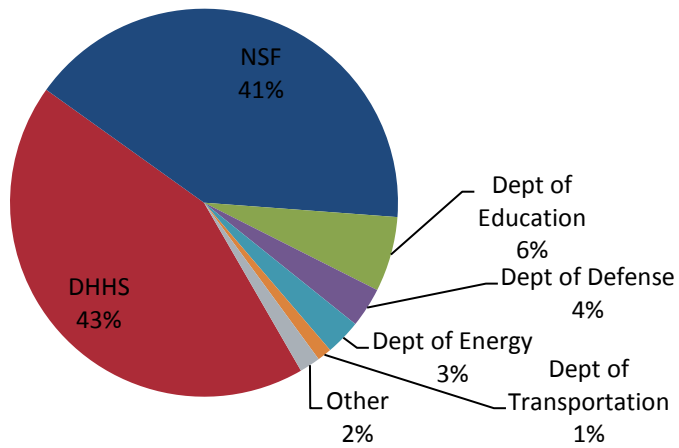


Figure 3.8: Federal Proposal \$ by Sponsor, FY2016



4. Expenditure Activity for Fiscal Year 2016

4.1: Sponsored Program Expenditures by Dean/Department

Worcester Polytechnic Institute
Summary of Expenditures by Department
July 1, 2015 to June 30, 2016

Department	Compensation & Benefits	Equipment, Materials & Supplies	Travel	Subawards	Indirect Costs	Other Direct Costs	Cost Sharing	Totals
Arts & Sciences								
Biology S/R	\$ 318,380	\$ 89,506	\$ 8,501	\$ -	\$ 255,014	\$ 82,479	\$ (32,191)	\$ 721,690
Chemistry S/R	\$ 494,978	\$ 76,749	\$ 23,730	\$ 154,257	\$ 380,926	\$ 1,901	\$ (28,811)	\$ 1,103,730
Computer Science S/R	\$ 1,803,716	\$ 9,160	\$ 88,547	\$ 359,749	\$ 938,217	\$ 520,575	\$ (63,023)	\$ 3,656,940
Humanities S/R	\$ 12,093	\$ 4,395	\$ 14,823	\$ -	\$ 17,901	\$ 97,516	\$ -	\$ 146,727
Math S/R	\$ 586,648	\$ 3,863	\$ 77,664	\$ 76	\$ 246,211	\$ 142,369	\$ (17,322)	\$ 1,039,508
Physics S/R	\$ 347,588	\$ 83,691	\$ 12,765	\$ 54,921	\$ 131,922	\$ 70,758	\$ (57,587)	\$ 644,059
Social Science S/R	\$ 251,547	\$ 1,552	\$ 39,647	\$ 1,791	\$ 203,082	\$ 106,750	\$ (10,409)	\$ 593,960
<i>A&S Subtotal</i>	\$ 3,814,949	\$ 268,915	\$ 265,677	\$ 570,794	\$ 2,173,275	\$ 1,022,348	\$ (209,343)	\$ 7,906,615
School of Business	\$ 417,825	\$ 5,290	\$ 18,275	\$ 92,473	\$ 269,950	\$ 71,064	\$ (5,408)	\$ 869,469
Engineering								
Biomedical S/R	\$ 964,170	\$ 131,748	\$ 90,096	\$ 672,643	\$ 487,462	\$ 289,487	\$ (164,684)	\$ 2,470,921
Chem Eng S/R	\$ 1,028,840	\$ 70,273	\$ 28,938	\$ 406,460	\$ 423,509	\$ 486,603	\$ (207,843)	\$ 2,236,780
Civil & Environmental Eng S	\$ 219,951	\$ 17,048	\$ 19,278	\$ -	\$ 122,879	\$ 178,547	\$ (56,553)	\$ 501,150
ECE S/R	\$ 1,375,734	\$ 48,492	\$ 76,139	\$ 57,929	\$ 711,892	\$ 63,366	\$ (88,758)	\$ 2,244,793
Fire Protection S/R	\$ 919,854	\$ 216,331	\$ 5,919	\$ 138,778	\$ 609,979	\$ 72,110	\$ (119,676)	\$ 1,843,295
ME S/R	\$ 2,155,185	\$ 1,718,747	\$ 116,126	\$ 5,136,309	\$ 1,268,227	\$ 367,180	\$ (243,287)	\$ 10,518,486
<i>Engineering Subtotal</i>	\$ 6,663,735	\$ 2,202,639	\$ 336,495	\$ 6,412,119	\$ 3,623,947	\$ 1,457,293	\$ (880,803)	\$ 19,815,424
IGSD	\$ 36,493	\$ -	\$ 14,973	\$ -	\$ 29,262	\$ (384)	\$ -	\$ 80,344
Other	\$ 343,098	\$ 17,320	\$ 65,755	\$ 118,372	\$ 180,053	\$ 378,272	\$ (40,634)	\$ 1,062,238
<hr/>								
University Total	\$ 11,276,100	\$ 2,494,164	\$ 701,175	\$ 7,193,759	\$ 6,276,487	\$ 2,928,593	\$ (1,136,187)	\$ 29,734,091
<i>STEM Depts</i>	<i>\$ 10,466,591</i>	<i>\$ 2,467,160</i>	<i>\$ 587,349</i>	<i>\$ 6,982,913</i>	<i>\$ 5,779,321</i>	<i>\$ 2,382,125</i>	<i>\$ (1,090,146)</i>	<i>\$ 27,575,312</i>

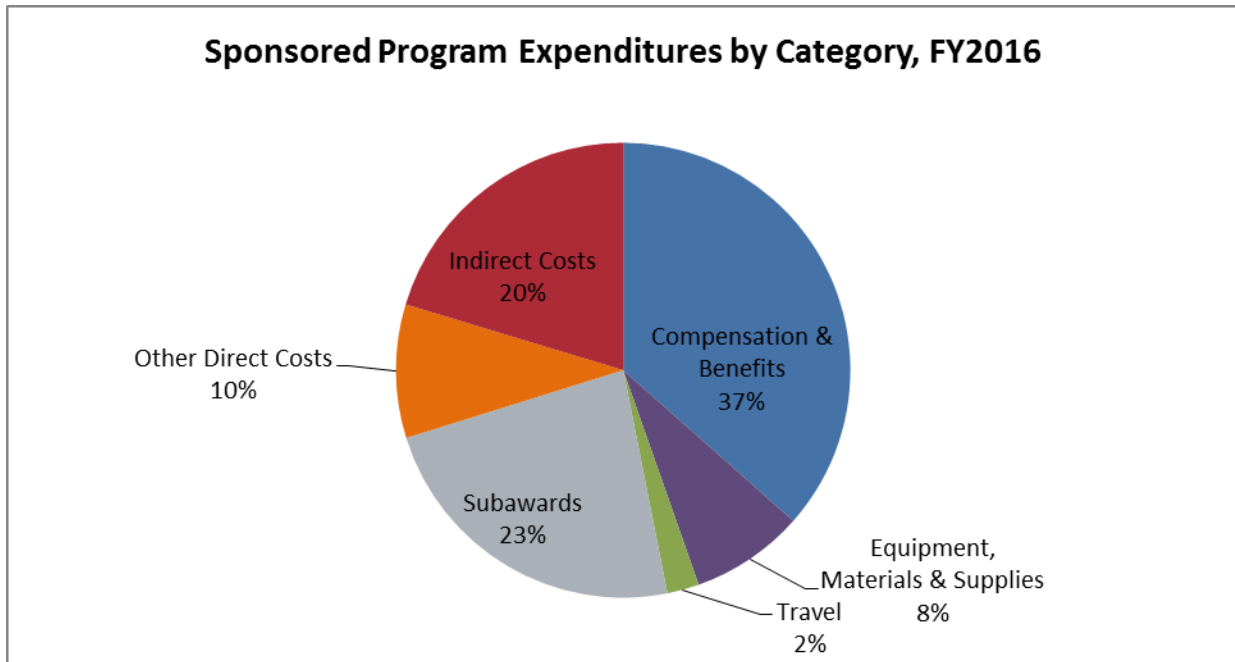
4.2 Comparison of FY2016 and FY2015

**Worcester Polytechnic Institute
Comparative Summary of Sponsored Program Expenditure Activity
FY2016 and FY2015**

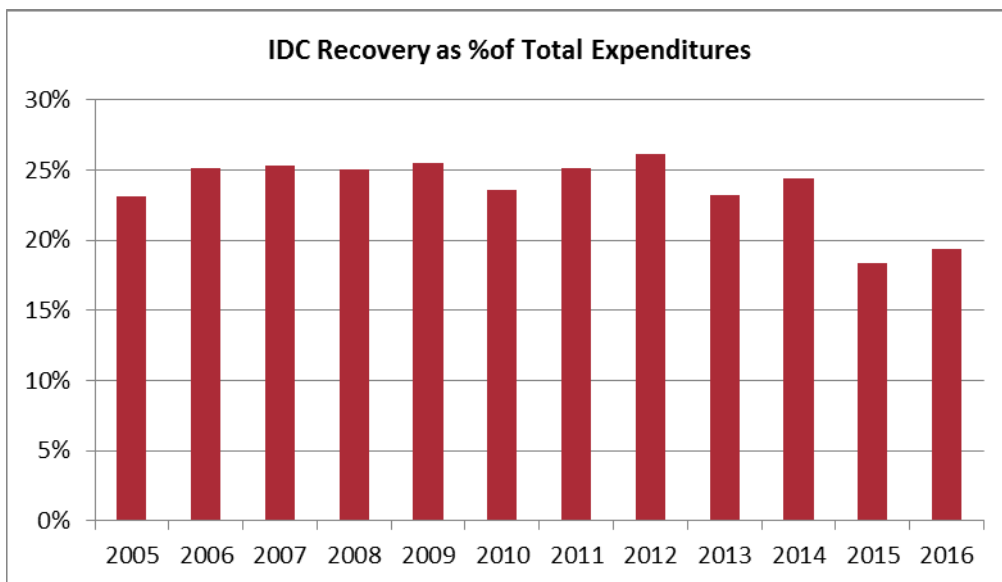
<u>Element of Cost</u>	<u>FY2016 Expenses</u>	<u>FY2015 Expenses</u>	<u>% Change</u>
Salaries & Wages	\$7,947,296	\$6,884,193	15.4%
Fringe Benefits	1,226,964	1,077,600	13.9%
Equipment	1,024,576	971,068	5.5%
Other Direct Expenses	<u>13,258,766</u>	<u>14,129,915</u>	-6.2%
Subtotal Direct Program Costs	\$23,457,604	\$23,062,776	1.7%
Indirect Costs	<u>6,276,487</u>	<u>5,601,138</u>	12.1%
Total Program Costs	\$29,734,091	\$28,663,914	3.7%
Less: WPI Cost Sharing ¹	<u>(1,136,187)</u>	<u>(800,379)</u>	42.0%
Net Externally-sponsored Expenditures	<u><u>\$28,597,904</u></u>	<u><u>\$27,863,535</u></u>	2.6%

¹Due to the method used for recording expenditures, a breakdown of WPI cost sharing to net against direct sponsored program costs by category is not possible without further analysis.

4.2: Expenditures by Category



4.3: Indirect Cost Recovery (Historical)



5. Faculty Participation and Productivity

This section contains information relating to the faculty's level of productivity as it pertains to sponsored programs. Productivity, in this sense, is the rate at which faculty receive awards and/or participate in proposals, whether as a principal investigator or as a co-principal investigator.

5.1: Faculty Award Productivity by PI Department

Worcester Polytechnic Institute
Award Productivity by Department (Tenured & Tenure Track Faculty as PI Only)
Fiscal Year 2016

Department	# of faculty	# receiving awards	% receiving awards	# of Awards	Awards Per Faculty Member	Total \$ Awarded	\$ IDC Awarded	\$ Awarded per faculty member	\$ IDC awarded per faculty member
Arts & Sciences									
BBT	15	5	33%	11	0.73	\$ 933,236	\$ 255,667	\$ 62,216	\$ 17,044
CBC	11	4	36%	7	0.64	1,573,880	434,714	143,080	39,519
CS	26	8	31%	19	0.73	3,037,950	707,173	116,844	27,199
H&A	31	1	3%	1	0.03	199,988	35,463	6,451	1,144
MA	26	8	31%	9	0.35	1,057,195	258,000	40,661	9,923
PH	11	3	27%	4	0.36	610,200	99,431	55,473	9,039
SSPS	12	2	17%	3	0.25	78,240	2,280	6,520	190
A&S Totals	132	31	23%	54	0.41	7,490,689	1,792,728	56,748	13,581
Business	25	4	16%	8	0.32	447,337	114,118	17,893	4,565
Engineering									
BME	10	7	70%	13	1.30	3,642,805	482,020	364,281	48,202
CHE	10	4	40%	12	1.20	1,474,339	404,214	147,434	40,421
CEE	11	2	18%	4	0.36	113,536	6,545	10,321	595
ECE	19	5	26%	17	0.89	1,724,117	145,319	90,743	7,648
FPE	4	2	50%	5	1.25	1,266,400	297,439	316,600	74,360
ME	32	13	41%	29	0.91	4,619,070	908,962	144,346	28,405
Engineering Totals	86	33	38%	80	0.93	12,840,267	2,244,499	149,305	26,099
IGSD	2	0	0%	0	0.00	-	-	-	-
TOTALS	245	68	28%	142	0.58	\$ 20,778,293	\$ 4,151,345	\$ 84,809	\$ 16,944
STEM Departments	187	63	34%	133	0.71	\$ 20,130,968	\$ 4,001,764	\$ 107,652	\$ 21,400

5.2: Faculty Proposal Participation by PI Department

Worcester Polytechnic Institute
Proposal Productivity by Department (Tenured & Tenure Track Faculty as PI Only)
Fiscal Year 2016

Department	# of faculty	# submitting proposals	Participation rate	# of Proposals Submitted	Proposals Per Faculty Member	Proposal \$ Volume	\$ requested per faculty member	\$ requested per submitting faculty member	Average proposal amount
Arts & Sciences									
BBT	15	9	60%	19	1.27	\$ 12,653,129	\$ 843,542	\$ 843,542	\$ 665,954
CBC	11	7	64%	18	1.64	13,106,115	\$ 1,191,465	1,191,465	\$ 728,118
CS	26	18	69%	62	2.38	88,409,919	\$ 3,400,382	3,400,382	\$ 1,425,966
H&A	31	4	13%	4	0.13	2,569,903	\$ 82,900	82,900	\$ 642,476
MA	26	15	58%	26	1.00	6,533,615	\$ 251,293	251,293	\$ 251,293
PH	11	4	36%	13	1.18	5,787,979	\$ 526,180	526,180	\$ 445,229
SSPS	12	7	58%	17	1.42	9,715,884	\$ 809,657	809,657	\$ 571,523
A&S Totals	132	64	48%	159	1.20	138,776,544	\$ 1,051,337	1,051,337	872,808
Business	25	8	32%	9	0.36	1,735,613	69,425	69,425	192,846
Engineering									
BME	10	10	100%	32	3.20	20,147,977	2,014,798	2,014,798	629,624
CHE	10	7	70%	23	2.30	6,141,679	614,168	614,168	267,030
CEE	11	6	55%	21	1.91	7,973,104	724,828	724,828	379,672
ECE	19	11	58%	28	1.47	10,104,115	531,796	531,796	360,861
FPE	4	2	50%	3	0.75	342,038	85,510	85,510	114,013
ME	32	15	47%	65	2.03	23,700,664	740,646	740,646	364,626
Engineering Totals	86	51	59%	172	2.00	68,409,577	\$ 795,460	795,460	397,730
IGSD	2	0	0%	0	0.00	-	-	-	-
TOTALS	245	123	50%	340	1.39	\$ 208,921,734	\$ 852,742	\$ 852,742	614,476
STEM Departments	187	111	59%	327	1.75	\$ 204,616,218	\$ 1,094,204	\$ 1,094,204	\$ 625,738

5.3 Faculty Award Participation by Department (including co-PIs)

Worcester Polytechnic Institute
Number of Faculty Participating as PI or Co-PI on FY 2016 Awards
(Tenured & Tenure-track Faculty Only)

Department	# of faculty	# of faculty receiving awards as PI only	# of faculty receiving awards as co-PI only	# of faculty receiving awards as PI and co-PI	Total faculty receiving awards	Overall participation rate
Arts & Sciences						
BBT	15	4	1	1	6	40.0%
CBC	11	4	1	0	5	45.5%
CS	26	7	3	1	11	42.3%
H&A	31	1	0	0	1	3.2%
MA	26	8	2	0	10	38.5%
PH	11	2	2	1	5	45.5%
SSPS	12	2	1	0	3	25.0%
A&S Total	132	28	10	3	41	31.1%
Business	25	2	1	2	5	20.0%
Engineering						
BME	10	3	1	4	8	80.0%
CHE	10	4	1	0	5	50.0%
CEE	11	2	1	0	3	27.3%
ECE	19	4	2	1	7	36.8%
FPE	4	2	2	0	4	100.0%
ME	32	8	3	5	16	50.0%
Engineering Total	86	23	10	10	43	50.0%
IGSD	2	0	0	0	0	0.0%
Totals	245	53	21	15	89	36.3%
STEM Depts	187	50	20	13	83	44.4%

5.4 Faculty Proposal Participation by Department (including co-PIs)

Worcester Polytechnic Institute
Number of Faculty Participating as PI or Co-PI on FY 2016 Proposals
(Tenured & Tenure-track Faculty Only)

Department	# of faculty	# of faculty submitting proposals as PI only	# of faculty submitting proposals as co-PI only	# of faculty submitting proposals as PI and co-PI	Total faculty submitting proposals	Overall participation rate
Arts & Sciences						
BBT	15	7	2	2	11	73.3%
CBC	11	4	1	3	8	72.7%
CS	26	4	3	14	21	80.8%
H&A	31	3	2	1	6	19.4%
MA	26	9	1	11	21	80.8%
PH	11	2	3	2	7	63.6%
SSPS	12	2	4	4	10	83.3%
A&S Total	132	31	16	37	84	63.6%
Business	25	6	1	3	10	40.0%
Engineering						
BME	10	3	2	5	10	100.0%
CHE	10	3	0	4	7	70.0%
CEE	11	1	3	4	8	72.7%
ECE	19	7	2	4	13	68.4%
FPE	4	1	2	1	4	100.0%
ME	32	6	6	9	21	65.6%
Engineering Total	86	21	15	27	63	73.3%
IGSD	2	0	0	0	0	0.0%
Totals	245	58	32	67	157	64.1%
STEM Depts	187	49	29	63	141	75.4%

6. Success of FY2015 Proposals

It takes, on average, approximately seven months to receive a funding decision on each proposal that we submit. Because of this, it is still too soon to know how our FY 2016 proposals have fared – almost half are still awaiting a decision. We can, however, look at our proposals from FY 2015. These proposals were submitted prior to June 30, 2016 and have had ample time to be reviewed by the funding agencies.

The success rates for FY 2015 proposals are shown in figures 6.1 and 6.2 below.

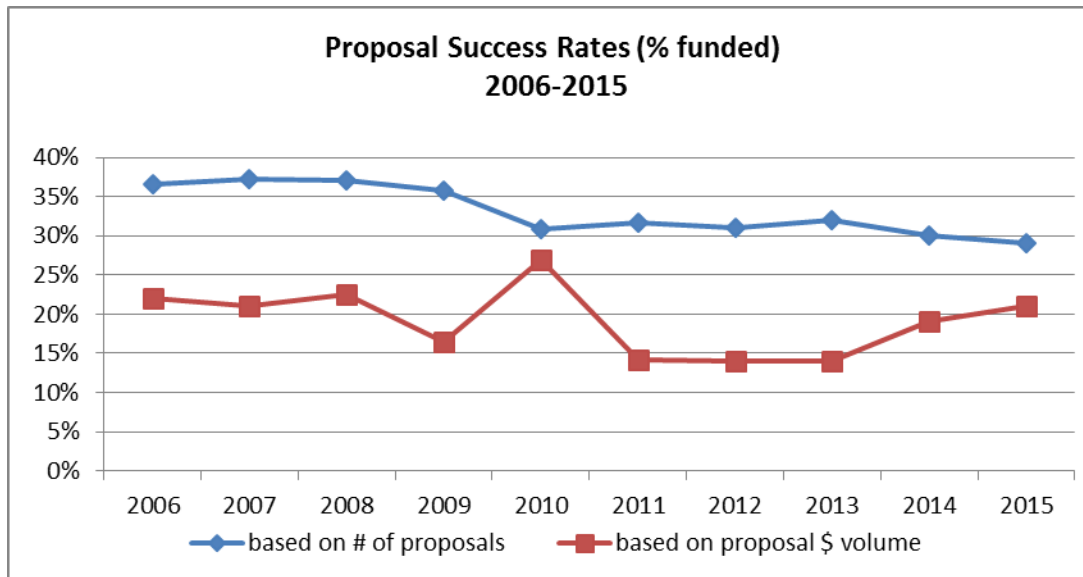
Figure 6.1

**Worcester Polytechnic Institute
Status of Proposals Submitted in FY 2015**

Status	Number	%	\$ Value¹	%
Funded	111	29%	\$ 50,337,868	21%
Declined	249	66%	\$ 182,138,822	76%
Pending	18	5%	\$ 8,194,150	3%
Total	378	100%	\$ 240,670,840	100%

¹ Based on amount of original proposal; assumes full amount will be awarded

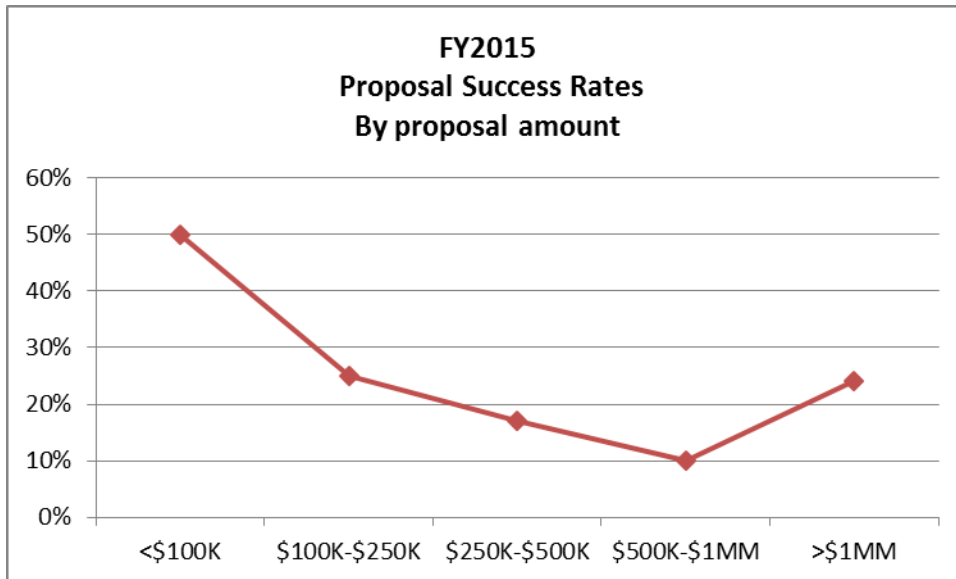
Figure 6.2



6.3 Success Rates by Proposal Size

Worcester Polytechnic Institute
Proposal Success Rates, By Proposal \$ Value
Based on \$ amount requested/funded
Proposals submitted July 1, 2014 to June 30, 2015

	<u><\$100K</u>	<u>\$100K-\$250K</u>	<u>\$250K-\$500K</u>	<u>\$500K-\$1MM</u>	<u>>\$1MM</u>
Awarded	50%	25%	17%	10%	24%
Declined	44%	73%	77%	85%	74%
Pending	6%	2%	6%	5%	2%
Total	100%	100%	100%	100%	100%



7. Historical Review of Proposals, Awards, and Expenditures

Figure 7.1 below provides a snapshot of all proposal, award, and expenditure totals for the most recent ten years. Figure 7.2 on the following page is a similar report, but the amounts shown are net of the impact of Congressional appropriations (“earmarks”), thus illustrating the results of conventional, peer-reviewed proposals only.

Figure 7.1

**Worcester Polytechnic Institute
Ten-Year Historical Summary of Sponsored Program Activity (Including Congressional Funding)
FY2007 (Base Year) to FY2016**

Fiscal Year	Proposal Volume				Award Volume				Expenditure Volume ¹		
	No.	Amount	% Change from Prior Yr.	% Change from Base Yr.	No.	Amount	% Change from Prior Yr.	% Change from Base Yr.	Amount	% Change from Prior Yr.	% Change from Base Year
Base 2007	217	63,058,847			120	11,436,003			11,736,587		
2008	274	91,400,387	44.9%	44.9%	126	14,631,997	27.9%	27.9%	12,129,731	3.3%	3.3%
2009	312	126,584,577	38.5%	100.7%	139	13,706,844	-6.3%	19.9%	12,426,357	2.4%	5.9%
2010	344	185,350,701	46.4%	193.9%	152	17,374,461	26.8%	51.9%	15,117,369	21.7%	28.8%
2011	288	113,086,144	-39.0%	79.3%	136	18,072,893	4.0%	58.0%	17,629,987	16.6%	50.2%
2012	340	207,378,461	83.4%	228.9%	140	18,149,913	0.4%	58.7%	14,819,675	-15.9%	26.3%
2013	345	148,079,871	-28.6%	134.8%	146	25,121,063	38.4%	119.7%	18,379,939	24.0%	56.6%
2014	376	165,351,904	11.7%	162.2%	159	32,993,647	31.3%	188.5%	21,722,725	18.2%	85.1%
2015	379	241,028,388	45.8%	282.2%	194	34,283,312	3.9%	199.8%	28,663,914	32.0%	144.2%
2016	391	224,319,427	-6.9%	255.7%	192	23,089,534	-32.7%	101.9%	29,734,091	3.7%	153.3%

¹Source: Sponsored Programs and Research Accounting files

Figure 7.2

**Worcester Polytechnic Institute
Ten-Year Historical Summary of Sponsored Program Activity (Net of Congressional Funding)
FY2007 (Base Year) to FY2016**

Fiscal Year	Proposal Volume				Award Volume				Expenditure Volume ¹		
	No.	Amount	% Change from Prior Yr.	% Change from Base Yr.	No.	Amount	% Change from Prior Yr.	% Change from Base Yr.	Amount	% Change from Prior Yr.	% Change from Base Year
Base 2007	216	62,219,847			120	11,436,003			9,254,134		
2008	272	89,692,387	44.2%	44.2%	123	12,084,997	5.7%	5.7%	11,240,643	21.5%	21.5%
2009	311	124,379,627	38.7%	99.9%	139	13,706,844	13.4%	19.9%	11,519,641	2.5%	24.5%
2010	344	185,350,701	49.0%	197.9%	151	17,129,461	25.0%	49.8%	13,957,224	21.2%	50.8%
2011	287	112,152,541	-39.5%	80.3%	134	17,019,290	-0.6%	48.8%	16,889,260	21.0%	82.5%
2012	339	146,681,871	30.8%	135.7%	139	23,723,063	39.4%	107.4%	14,372,751	-14.9%	55.3%
2013	345	148,079,871	1.0%	138.0%	146	25,121,063	5.9%	119.7%	17,589,880	22.4%	90.1%
2014	376	165,351,904	11.7%	165.8%	159	32,993,647	31.3%	188.5%	20,892,204	18.8%	125.8%
2015	379	241,028,388	45.8%	287.4%	194	34,283,312	3.9%	199.8%	28,663,914	37.2%	209.7%
2016	391	224,319,427	-6.9%	260.5%	192	23,089,534	-32.7%	101.9%	29,734,091	3.7%	221.3%

¹Source: Sponsored Programs and Research Accounting files

Appendix: Historical and Supplementary Data

Figure A.1: Proposal/Award \$ Volumes (including Congressional funding)

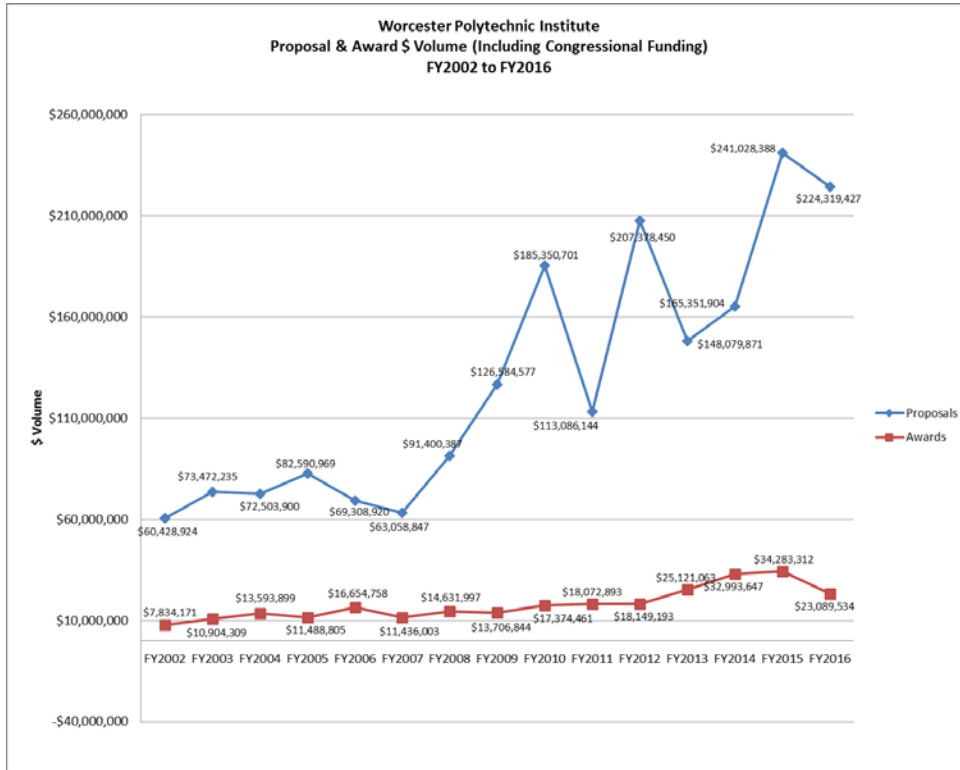


Figure A.2: Proposal/Award Counts (including Congressional funding)

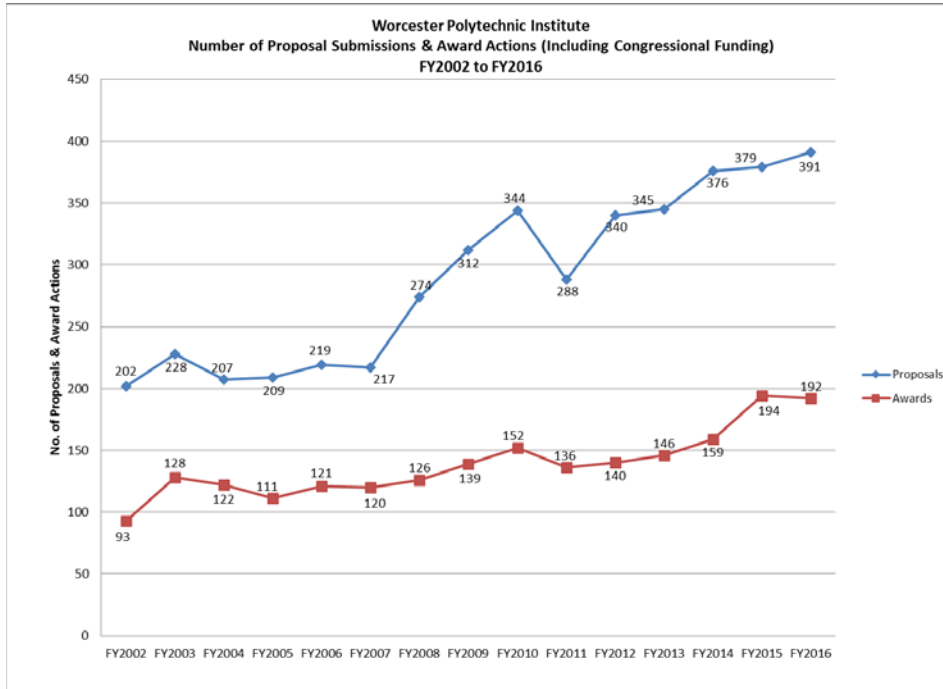


Figure A.3: Proposal/Award \$ Volumes (net of Congressional funding)

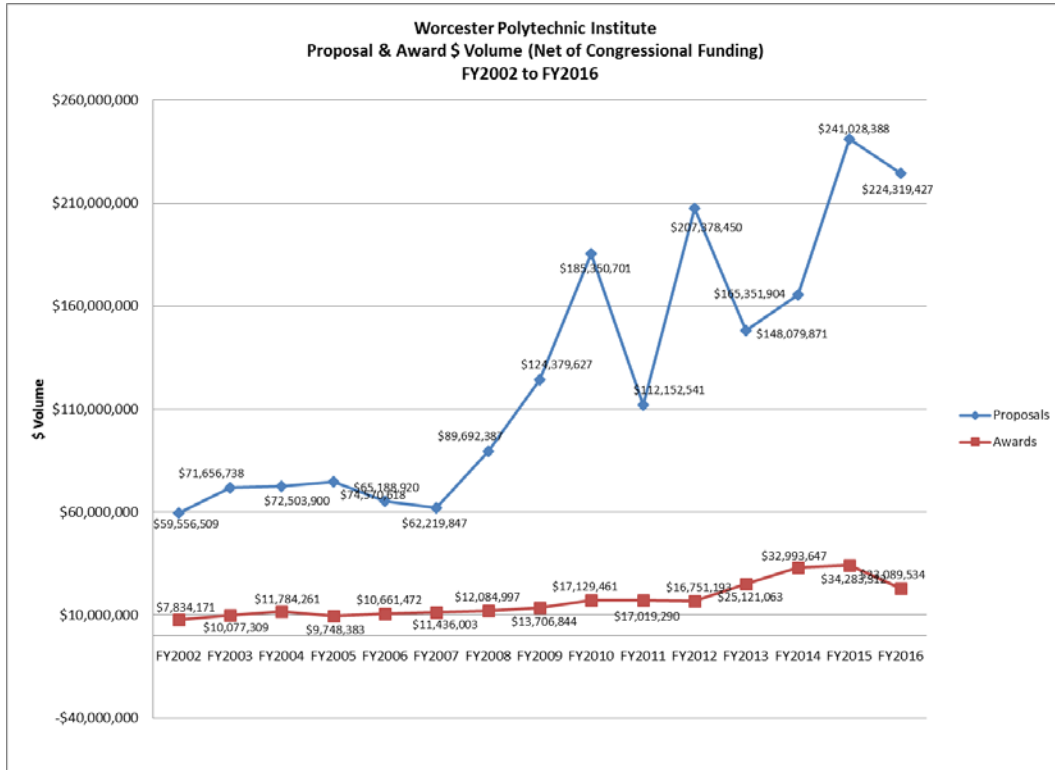


Figure A.4: Proposal/Award Counts (net of Congressional funding)

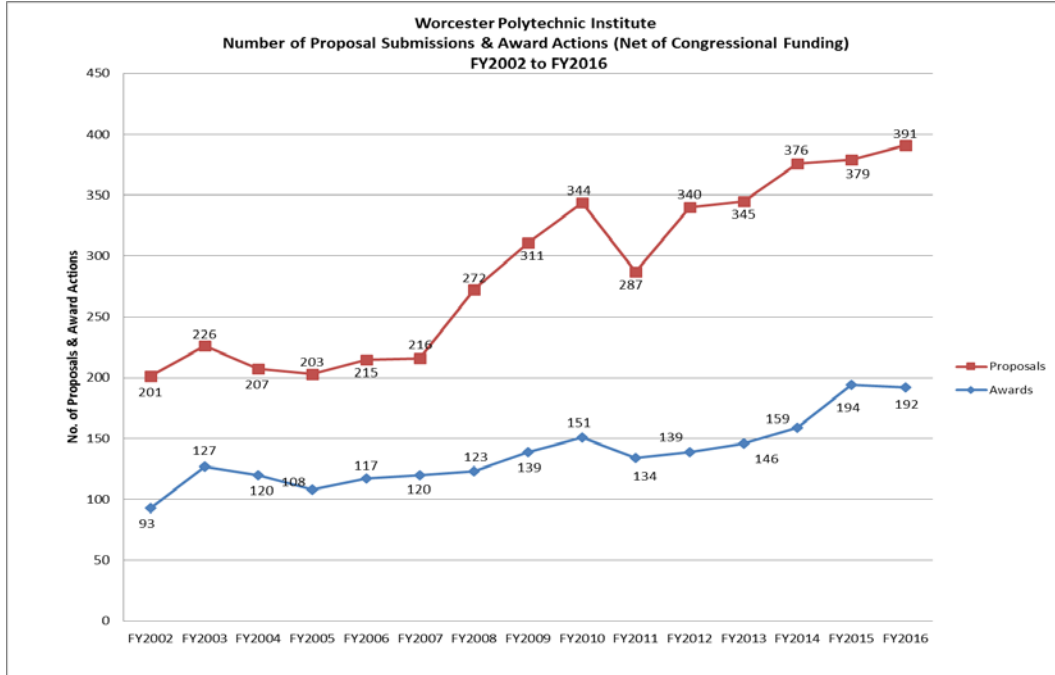


Figure A.5: Ten-year departmental proposal/award trends

