



WPI

WORCESTER POLYTECHNIC INSTITUTE

REPORT OF SPONSORED PROGRAM ACTIVITY

for the period

July 1, 2017 to June 30, 2018

Prepared by the

Office of Sponsored Programs

(For WPI Use Only)

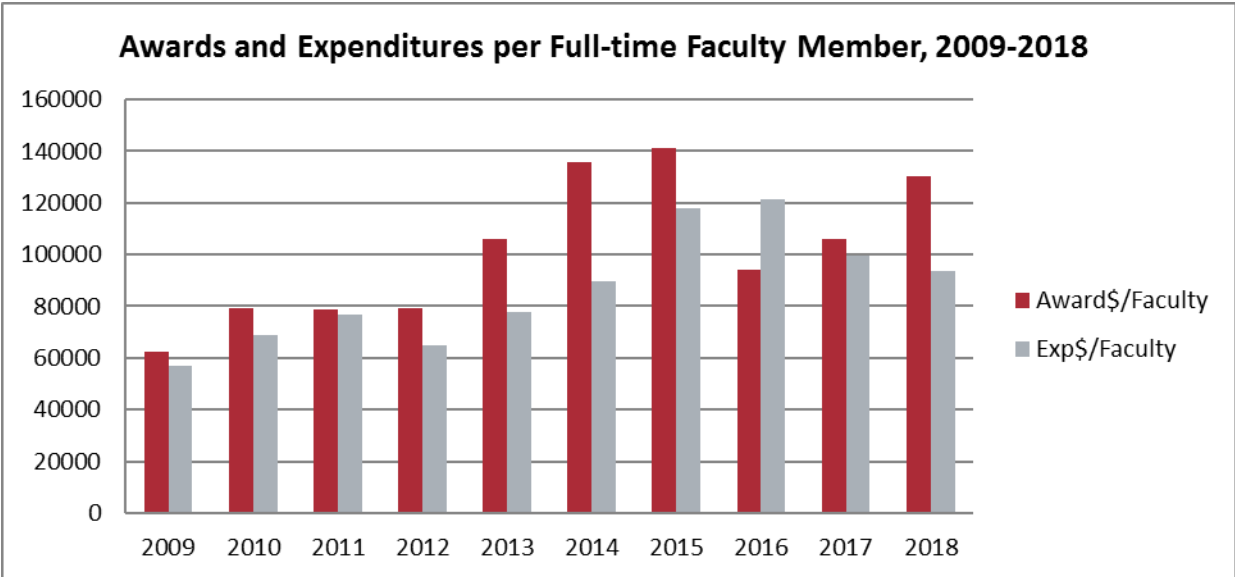
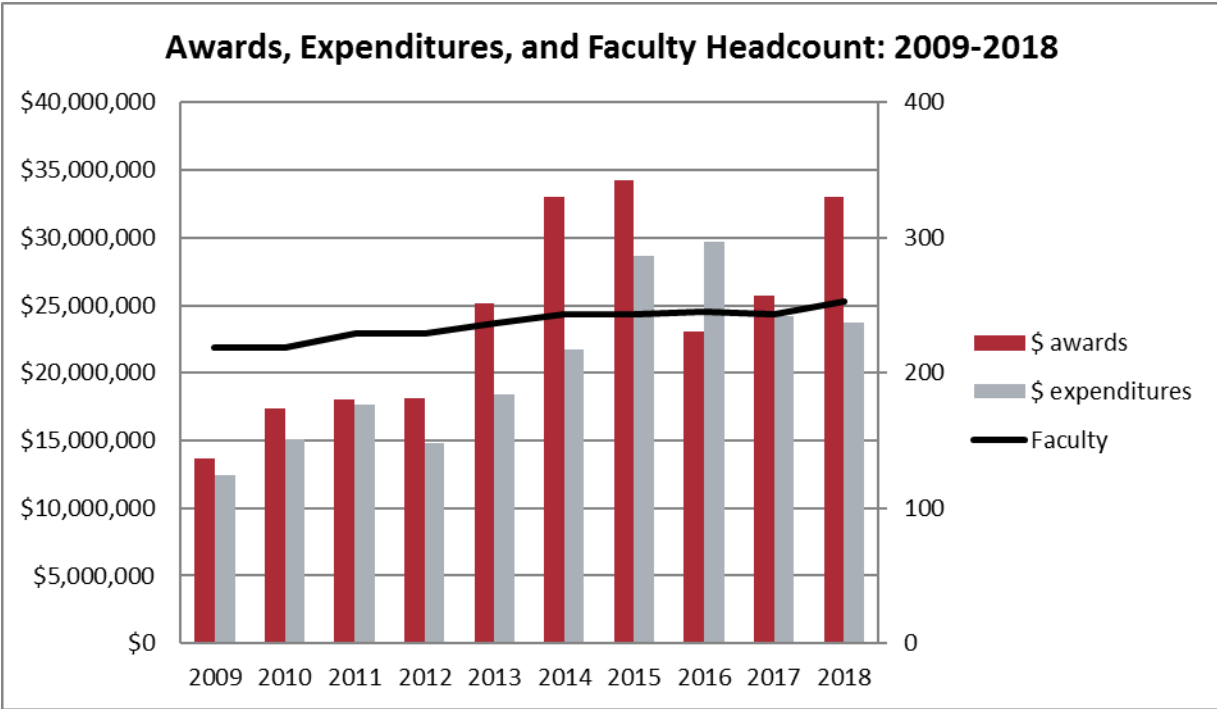
Introduction

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 by Dean/Department, Three-year Summary

Worcester Polytechnic Institute						
Summary of Award Activity by Department						
Fiscal Years 2016-2018						
Department	Award Actions Received					
	FY 2018		FY 2017		FY2016	
	No.	Amount	No.	Amount	No.	Amount
Arts & Sciences						
Biology & Biotechnology	39	\$ 3,051,221	26	\$ 1,280,219	30	\$ 1,213,770
Chemistry & Biochemistry	6	\$ 1,471,733	8	\$ 1,604,628	7	\$ 1,573,880
Computer Science	27	\$ 4,293,103	20	\$ 3,729,950	24	\$ 3,896,366
Humanities & Arts	3	\$ 313,937	3	\$ 388,935	1	\$ 199,988
Mathematical Sciences	15	\$ 1,434,785	11	\$ 825,620	9	\$ 1,057,195
Physics	8	\$ 5,384,219	2	\$ 116,492	4	\$ 610,200
Social Science & Policy Studies	4	\$ 1,166,001	5	\$ 2,085,881	4	\$ 79,740
<i>Total</i>	<i>102</i>	<i>\$ 17,114,999</i>	<i>75</i>	<i>\$ 10,031,725</i>	<i>79</i>	<i>\$ 8,631,139</i>
Business						
	5	\$ 203,895	10	\$ 365,835	19	\$ 503,715
Engineering						
Biomedical Engineering	15	\$ 2,563,545	15	\$ 2,391,854	14	\$ 3,700,807
Chemical Engineering	10	\$ 1,254,479	14	\$ 1,852,578	14	\$ 1,498,354
Civil & Environmental Engineering	7	\$ 447,064	5	\$ 554,322	4	\$ 113,536
Electrical & Computer Engineering	14	\$ 995,325	21	\$ 2,479,160	18	\$ 1,858,977
Fire Protection Engineering	7	\$ 268,626	8	\$ 385,352	6	\$ 1,432,039
Mechanical Engineering	49	\$ 8,561,134	44	\$ 6,681,923	29	\$ 4,619,070
<i>Total</i>	<i>102</i>	<i>\$ 14,090,173</i>	<i>107</i>	<i>\$ 14,345,189</i>	<i>85</i>	<i>\$ 13,222,783</i>
Interdisciplinary & Global Studies						
	1	\$ 68,448	1	\$ 43,070	1	\$ 61,214
Other						
	14	\$ 1,491,047	12	\$ 949,449	8	\$ 670,683
University Total	224	\$ 32,968,562	205	\$ 25,735,268	192	\$ 23,089,534

2.2: Proposals by Dean/Department, Three-year Summary

Worcester Polytechnic Institute
Summary of Proposal Activity by Department
Fiscal Years 2016-2018

Department	Proposals Submitted					
	FY 2018		FY 2017		FY2016	
	No.	Amount	No.	Amount	No.	Amount
Arts & Sciences						
Biology & Biotechnology	18	\$ 5,979,346	27	\$ 11,117,123	25	\$ 16,664,582
Chemistry & Biochemistry	19	\$ 15,164,667	23	\$ 14,861,758	23	\$ 14,031,454
Computer Science	64	\$ 55,106,424	65	\$ 63,769,881	63	\$ 90,931,859
Humanities & Arts	6	\$ 950,449	6	\$ 1,466,355	6	\$ 2,801,271
Mathematical Sciences	32	\$ 10,902,899	33	\$ 10,709,063	31	\$ 7,138,020
Physics	14	\$ 11,223,643	19	\$ 7,343,941	15	\$ 6,972,843
Social Science & Policy Studies	14	\$ 10,307,868	11	\$ 5,722,442	19	\$ 9,874,384
<i>Total</i>	<i>167</i>	<i>\$ 109,635,296</i>	<i>184</i>	<i>\$ 114,990,563</i>	<i>182</i>	<i>\$ 148,414,413</i>
Business	17	\$ 6,415,282	8	\$ 5,141,302	11	\$ 2,737,718
Engineering						
Biomedical Engineering	30	\$ 17,159,715	35	\$ 15,876,987	36	\$ 20,566,371
Chemical Engineering	32	\$ 13,069,970	23	\$ 9,781,243	29	\$ 7,359,639
Civil & Environmental Engineering	11	\$ 2,190,107	22	\$ 6,143,794	22	\$ 8,108,378
Electrical & Computer Engineering	19	\$ 6,172,118	22	\$ 5,563,003	30	\$ 10,289,038
Fire Protection Engineering	7	\$ 3,251,568	17	\$ 5,681,041	5	\$ 627,926
Mechanical Engineering	71	\$ 41,973,814	64	\$ 39,721,256	68	\$ 23,943,163
<i>Total</i>	<i>170</i>	<i>\$ 83,817,292</i>	<i>183</i>	<i>\$ 82,767,324</i>	<i>190</i>	<i>\$ 70,894,515</i>
Interdisciplinary & Global Studies	0	\$ -	3	\$ 228,077	1	\$ 91,000
Other	12	\$ 2,342,187	10	\$ 1,845,762	7	\$ 2,181,781
University Total	366	\$ 202,210,057	388	\$ 204,973,028	391	\$ 224,319,427

2.3: Expenditures by Dean/Department, Three-year Summary

Worcester Polytechnic Institute
Summary of Sponsored Program Expenditures by Department
Fiscal Years 2016-2018

Department	Expenditures		
	FY 2018	FY 2017	FY2016
	Amount	Amount	Amount
Arts & Sciences			
Biology & Biotechnology	\$ 1,469,197	\$ 1,247,293	\$ 721,690
Chemistry & Biochemistry	\$ 1,596,653	\$ 1,624,868	\$ 1,103,730
Computer Science	\$ 3,073,162	\$ 2,993,952	\$ 3,652,269
Humanities & Arts	\$ 330,493	\$ 175,450	\$ 146,727
Mathematical Sciences	\$ 1,197,983	\$ 970,620	\$ 1,039,508
Physics	\$ 671,673	\$ 586,455	\$ 644,059
Social Science & Policy Studies	\$ 369,489	\$ 292,521	\$ 598,631
<i>Total</i>	\$ 8,708,650	\$ 7,891,159	\$ 7,906,614
Business	\$ 260,115	\$ 570,531	\$ 869,469
Engineering			
Biomedical Engineering	\$ 2,743,447	\$ 2,181,078	\$ 2,470,921
Chemical Engineering	\$ 1,382,627	\$ 1,534,631	\$ 2,288,013
Civil & Environmental Engineering	\$ 444,795	\$ 464,869	\$ 449,917
Electrical & Computer Engineering	\$ 2,092,077	\$ 2,216,294	\$ 2,244,793
Fire Protection Engineering	\$ 285,028	\$ 1,394,916	\$ 1,843,295
Mechanical Engineering	\$ 6,852,530	\$ 7,103,910	\$ 10,518,486
<i>Total</i>	\$ 13,800,504	\$ 14,895,698	\$ 19,815,425
Interdisciplinary & Global Studies	\$ 65,390	\$ 42,580	\$ 80,344
Other	\$ 862,081	\$ 819,036	\$ 1,062,239
University Total	\$ 23,696,740	\$ 24,219,004	\$ 29,734,091

3. Proposal & Award Activity for Fiscal Year 2018

3.1: Awards by Dean/Department

Figure 3.1 below provides departmental data for award actions received in fiscal year 2018. It includes of direct and indirect costs as well as the expected percentage of award dollars that will be allocated to indirect costs. (For a historical perspective on indirect cost recoveries, see figure 4.3).

“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, 2017 to June 30, 2018**

<u>Dean</u>	<u>Department</u>	<u>Count</u>	<u>Direct Costs</u>	<u>Indirect Costs</u>	<u>Total Costs</u>	<u>Average Award Amount</u>	<u>IDC as % of Total Costs</u>
Arts & Sciences							
	Biology & Biotechnology	39	\$ 2,226,705	\$ 824,516	\$ 3,051,221	\$ 78,236	27%
	Chemistry & Biochemistry	6	\$ 1,024,338	\$ 447,395	\$ 1,471,733	\$ 245,289	30%
	Computer Science	27	\$ 3,178,163	\$ 1,114,940	\$ 4,293,103	\$ 159,004	26%
	Humanities & Arts	3	\$ 286,506	\$ 27,431	\$ 313,937	\$ 104,646	9%
	Mathematical Sciences	15	\$ 1,120,072	\$ 314,713	\$ 1,434,785	\$ 95,652	22%
	Physics	8	\$ 5,235,291	\$ 148,928	\$ 5,384,219	\$ 673,027	3%
	Social Science & Policy Studies	4	\$ 1,010,050	\$ 155,951	\$ 1,166,001	\$ 291,500	13%
	<i>Total</i>	<i>102</i>	<i>\$ 14,081,125</i>	<i>\$ 3,033,874</i>	<i>\$ 17,114,999</i>	<i>\$ 167,794</i>	<i>18%</i>
Engineering							
	Biomedical Engineering	15	\$ 1,806,338	\$ 757,207	\$ 2,563,545	\$ 170,903	30%
	Chemical Engineering	10	\$ 902,672	\$ 351,807	\$ 1,254,479	\$ 125,448	28%
	Civil & Environmental Engineering	7	\$ 393,737	\$ 53,327	\$ 447,064	\$ 63,866	12%
	Electrical & Computer Engineering	14	\$ 734,593	\$ 260,732	\$ 995,325	\$ 71,095	26%
	Fire Protection Engineering	7	\$ 175,861	\$ 92,766	\$ 268,626	\$ 38,375	35%
	Mechanical Engineering	49	\$ 6,840,373	\$ 1,720,761	\$ 8,561,134	\$ 174,717	20%
	<i>Total</i>	<i>102</i>	<i>\$ 10,853,574</i>	<i>\$ 3,236,600</i>	<i>\$ 14,090,173</i>	<i>\$ 138,139</i>	<i>23%</i>
IGSD		1	\$ 43,719	\$ 24,729	\$ 68,448	\$ 68,448	36%
Foisie Business School		5	\$ 149,145	\$ 54,750	\$ 203,895	\$ 40,779	27%
Other		14	\$ 1,271,841	\$ 219,206	\$ 1,491,047	\$ 106,503	15%
University Total		224	\$ 26,399,404	\$ 6,569,159	\$ 32,968,562	\$ 147,181.08	20%
STEM Departments		201	\$ 24,648,193	\$ 6,243,043	\$ 30,891,235	\$ 153,687.74	20%

3.2: Awards by Sponsor

**Worcester Polytechnic Institute
Comparative Summary of Awards by Sponsor
FY 2018 and FY 2017**

Sponsor	FY2018				FY2017			
	No.	%	\$ Amount	%	No.	%	\$ Amount	%
Federal								
Dept of Defense	26	12%	\$ 5,457,174	17%	16	8%	\$ 3,234,342	13%
Dept of Education	7	3%	\$ 2,249,818	7%	3	1%	\$ 848,083	3%
Dept of Energy	6	3%	\$ 1,102,933	3%	2	1%	\$ 176,436	1%
Dept of Interior	2	1%	\$ 74,729	0%	1	0%	\$ 47,058	0%
DHHS	27	12%	\$ 5,512,930	17%	30	15%	\$ 5,241,550	20%
NASA	6	3%	\$ 195,984	1%	6	3%	\$ 236,664	1%
NSF	60	27%	\$ 9,136,515	28%	74	36%	\$ 12,221,512	47%
USDA	4	2%	\$ 275,919	1%	1	0%	\$ 151,347	1%
Other Federal	5	2%	\$ 290,759	1%	4	2%	\$ 293,955	1%
<i>Subtotal - Federal</i>	<i>143</i>	<i>64%</i>	<i>\$ 24,296,761</i>	<i>74%</i>	<i>137</i>	<i>67%</i>	<i>\$ 22,450,947</i>	<i>87%</i>
Commonwealth of Massachusetts Corporation	9	4%	\$ 4,685,165	14%	13	6%	\$ 910,938	4%
Foreign Organization	49	22%	\$ 2,460,846	7%	34	17%	\$ 1,133,861	4%
Foundation & Nonprofit	2	1%	\$ 54,500	0%	3	1%	\$ 364,873	1%
Public Organization (local govt)	19	8%	\$ 1,404,656	4%	15	7%	\$ 695,324	3%
<i>Subtotal - Non-Federal</i>	<i>81</i>	<i>36%</i>	<i>\$ 8,671,801</i>	<i>26%</i>	<i>68</i>	<i>33%</i>	<i>\$ 3,284,321</i>	<i>13%</i>
Grand Total	224		\$ 32,968,562		205		\$ 25,735,268	

Figure 3.3: FY2018 Award \$ by Sponsor Type

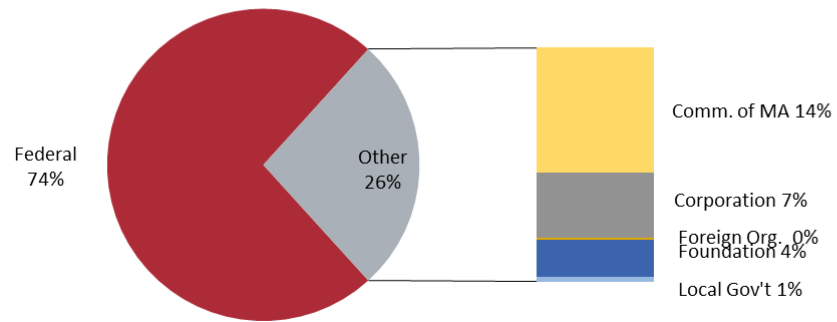
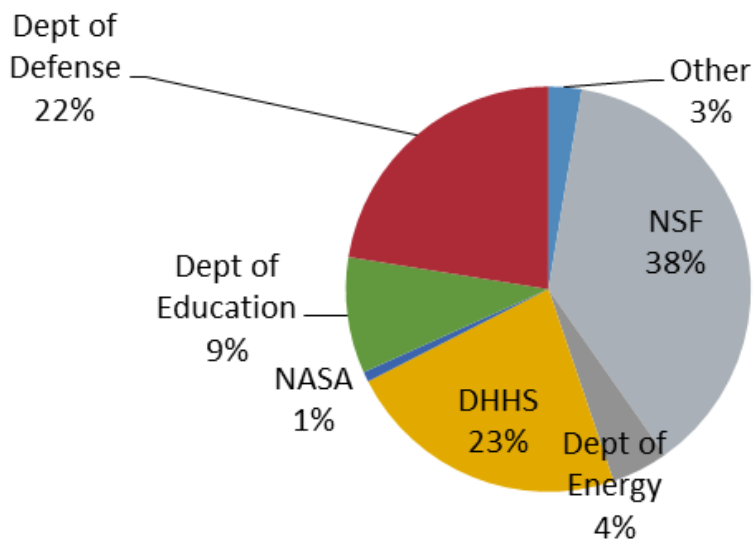


Figure 3.4: Federal Award \$ by Sponsor, FY2018



3.5 Proposals by Dean/Department

Figure 3.5 below provides a departmental summary of proposal submission statistics for fiscal year 2018. It includes of direct and indirect costs as well as the expected percentage of proposed funding which, if awarded, would be allocated to indirect costs. (For a historical perspective on indirect cost recoveries, see figure 4.3).

**Worcester Polytechnic Institute
Summary of Proposals Submitted
July 1, 2017 to June 30, 2018**

<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>IDC as % of Total Costs</u>
Arts & Sciences							
	Biology & Biotechnology	18	\$ 4,795,311	\$ 1,184,035	\$ 5,979,346	\$ 332,186	20%
	Chemistry & Biochemistry	19	\$ 10,595,493	\$ 4,569,174	\$ 15,164,667	\$ 798,140	30%
	Computer Science	64	\$ 43,976,299	\$ 11,130,125	\$ 55,106,424	\$ 861,038	20%
	Humanities & Arts	6	\$ 675,478	\$ 274,971	\$ 950,449	\$ 158,408	29%
	Mathematical Sciences	32	\$ 8,334,553	\$ 2,568,346	\$ 10,902,899	\$ 340,716	24%
	Physics	14	\$ 9,112,879	\$ 2,110,764	\$ 11,223,643	\$ 801,689	19%
	Social Science & Policy Studies	14	\$ 8,026,798	\$ 2,281,070	\$ 10,307,868	\$ 736,276	22%
	<i>Total</i>	<i>167</i>	<i>\$ 85,516,811</i>	<i>\$ 24,118,485</i>	<i>\$ 109,635,296</i>	<i>\$ 656,499</i>	<i>22%</i>
Engineering							
	Biomedical Engineering	30	\$ 12,669,679	\$ 4,490,036	\$ 17,159,715	\$ 571,991	26%
	Chemical Engineering	32	\$ 10,038,134	\$ 3,031,836	\$ 13,069,970	\$ 408,437	23%
	Civil & Environmental Engineering	11	\$ 1,645,676	\$ 544,431	\$ 2,190,107	\$ 199,101	25%
	Electrical & Computer Engineering	19	\$ 4,332,362	\$ 1,839,756	\$ 6,172,118	\$ 324,848	30%
	Fire Protection Engineering	7	\$ 2,471,805	\$ 779,763	\$ 3,251,568	\$ 464,510	24%
	Mechanical Engineering	71	\$ 33,349,828	\$ 8,623,986	\$ 41,973,814	\$ 591,180	21%
	<i>Total</i>	<i>170</i>	<i>\$ 64,507,484</i>	<i>\$ 19,309,808</i>	<i>\$ 83,817,292</i>	<i>\$ 493,043</i>	<i>23%</i>
IGSD		0	\$ -	\$ -	\$ -	\$ -	-
Foisie Business School		17	\$ 4,620,193	\$ 1,795,089	\$ 6,415,282	\$ 377,370	28%
Other		12	\$ 1,981,970	\$ 360,217	\$ 2,342,187	\$ 195,182	15%
University Total		366	\$ 156,626,458	\$ 45,583,599	\$ 202,210,057	\$ 552,486.49	23%
STEM Departments		331	\$ 149,348,817	\$ 43,153,322	\$ 192,502,139	\$ 581,577.46	22%

3.6 Proposals by Sponsor

Worcester Polytechnic Institute
Comparative Summary of Proposals by Sponsor
FY2018 and FY2017

Sponsor	FY2018				FY2017			
	No.	%	No.	%	No.	%	No.	%
Federal								
Dept of Commerce	3	1%	\$ 1,825,809	1%	4	1%	\$ 855,947	0%
Dept of Defense	26	7%	\$ 20,146,655	10%	22	6%	\$ 11,846,610	6%
Dept of Education	10	3%	\$ 28,000,155	14%	12	3%	\$ 27,865,553	14%
Dept of Energy	16	4%	\$ 10,552,154	5%	8	2%	\$ 6,269,830	3%
Dept of Homeland Security	3	1%	\$ 607,857	0%	5	1%	\$ 2,811,802	1%
Dept of Interior	0	0%	\$ -	0%	7	2%	\$ 3,394,180	2%
DHHS	54	15%	\$ 47,077,676	23%	57	15%	\$ 43,625,627	21%
Dept of Transportation	2	1%	\$ 554,542	0%	3	1%	\$ 332,530	0%
NASA	9	2%	\$ 2,090,618	1%	6	2%	\$ 1,716,557	1%
NEH	0	0%	\$ -	0%	1	0%	\$ 99,997	0%
NSF	140	38%	\$ 72,299,630	36%	165	43%	\$ 83,034,822	41%
USDA	2	1%	\$ 163,843	0%	2	1%	\$ 511,347	0%
ManufacturingUSA	8	2%	\$ 2,066,229	1%	0	0%	\$ -	0%
Other Federal	5	1%	\$ 2,436,135	1%	5	1%	\$ 1,440,958	1%
<i>Subtotal - Federal</i>	<i>278</i>	<i>76%</i>	<i>\$ 187,821,303</i>	<i>93%</i>	<i>297</i>	<i>77%</i>	<i>\$ 183,805,760</i>	<i>90%</i>
Commonwealth of Massachusetts	8	2%	\$ 5,551,322	3%	7	2%	\$ 5,194,415	3%
Corporation	35	10%	\$ 4,800,662	2%	29	5%	\$ 2,091,128	1%
Foreign Organization	1	0%	\$ 15,944	0%	5	2%	\$ 478,854	0%
Foundation & Nonprofit	41	11%	\$ 3,913,735	2%	46	7%	\$ 13,182,247	6%
Public Organization (local govt)	3	1%	\$ 107,091	0%	4	1%	\$ 170,657	0%
<i>Subtotal - Non-Federal</i>	<i>88</i>	<i>24%</i>	<i>\$ 14,388,754</i>	<i>7%</i>	<i>91</i>	<i>23%</i>	<i>\$ 21,117,301</i>	<i>10%</i>
Grand Total	366		\$ 202,210,057		388		\$ 204,923,061	

**Figure 3.7: FY2018
Proposal \$ by Sponsor Type**

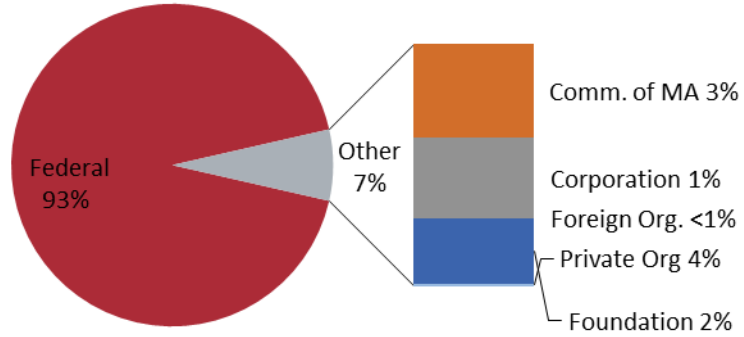
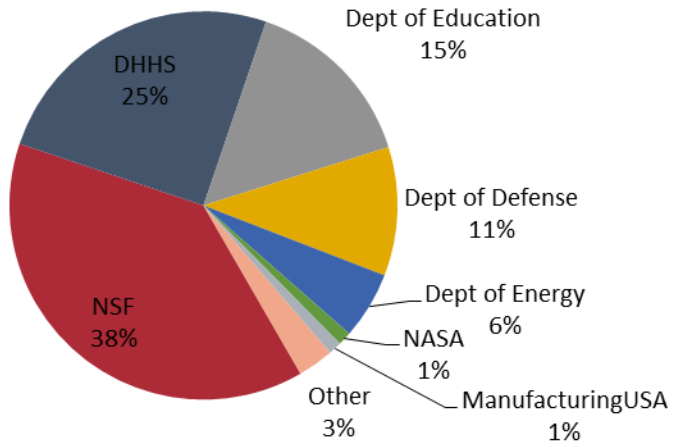


Figure 3.8: Federal Proposal \$ by Sponsor, FY2018



4. Expenditure Activity for Fiscal Year 2018

4.1: Sponsored Program Expenditures by Dean/Department

Worcester Polytechnic Institute
Summary of Expenditures by Department
July 1, 2017 to June 30, 2018

Department	Compensation & Benefits	Equipment, Materials & Supplies	Travel	Subawards	Indirect Costs	Other Direct Costs	Cost Sharing	Totals
Arts & Sciences								
Biology S/R	\$ 701,986	\$ 115,661	\$ 31,308	\$ -	\$ 455,482	\$ 187,337	\$ (22,577)	\$ 1,469,197
Chemistry S/R	\$ 751,419	\$ 152,321	\$ 11,449	\$ 136,916	\$ 489,301	\$ 76,493	\$ (21,245)	\$ 1,596,653
Computer Science S/R	\$ 1,600,026	\$ 52,135	\$ 52,844	\$ 118,567	\$ 673,406	\$ 661,324	\$ (85,141)	\$ 3,073,162
Humanities S/R	\$ 118,498	\$ 520	\$ 20,085	\$ -	\$ 38,228	\$ 153,162	\$ -	\$ 330,493
Math S/R	\$ 739,028	\$ 50,117	\$ 77,389	\$ -	\$ 281,555	\$ 63,202	\$ (13,309)	\$ 1,197,983
Physics S/R	\$ 497,163	\$ 30,587	\$ 15,978	\$ -	\$ 98,017	\$ 70,379	\$ (40,452)	\$ 671,673
Social Science S/R	\$ 224,280	\$ 2,408	\$ 15,893	\$ -	\$ 105,880	\$ 21,028	\$ -	\$ 369,489
<i>A&S Subtotal</i>	<i>\$ 4,632,401</i>	<i>\$ 403,749</i>	<i>\$ 224,947</i>	<i>\$ 255,482</i>	<i>\$ 2,141,870</i>	<i>\$ 1,232,925</i>	<i>\$ (182,723)</i>	<i>\$ 8,708,651</i>
School of Business	\$ 161,258	\$ 1,791	\$ 5,439	\$ 4,889	\$ 73,906	\$ 12,831	\$ -	\$ 260,115
Engineering								
Biomedical S/R	\$ 1,390,132	\$ 166,983	\$ 172,531	\$ 160,465	\$ 988,253	\$ 179,349	\$ (518,071)	\$ 2,539,641
Chem Eng S/R	\$ 701,815	\$ 91,257	\$ 25,771	\$ 12,623	\$ 288,174	\$ 339,448	\$ (76,461)	\$ 1,382,627
Civil & Environmental Eng S	\$ 199,767	\$ 18,675	\$ 16,603	\$ -	\$ 101,140	\$ 111,085	\$ (2,474)	\$ 444,795
ECE S/R	\$ 1,256,016	\$ 300,079	\$ 37,119	\$ 35,243	\$ 485,665	\$ 16,932	\$ (38,975)	\$ 2,092,077
Fire Protection S/R	\$ 191,336	\$ 5,453	\$ 5,204	\$ 1,910	\$ 96,763	\$ 23,150	\$ (38,788)	\$ 285,028
ME S/R	\$ 2,666,138	\$ 1,379,313	\$ 140,048	\$ 1,149,247	\$ 1,377,100	\$ 442,682	\$ (98,192)	\$ 7,056,336
<i>Engineering Subtotal</i>	<i>\$ 6,405,203</i>	<i>\$ 1,961,759</i>	<i>\$ 397,274</i>	<i>\$ 1,359,488</i>	<i>\$ 3,337,094</i>	<i>\$ 1,112,645</i>	<i>\$ (772,961)</i>	<i>\$ 13,800,503</i>
IGSD	\$ 32,969	\$ -	\$ 9,556	\$ -	\$ 22,866	\$ -	\$ -	\$ 65,390
Other	\$ 401,161	\$ 27,098	\$ 36,714	\$ 21,205	\$ 153,014	\$ 237,115	\$ (14,226)	\$ 862,082
University Total	\$ 11,632,993	\$ 2,394,396	\$ 673,931	\$ 1,641,065	\$ 5,728,750	\$ 2,595,517	\$ (969,911)	\$ 23,696,741

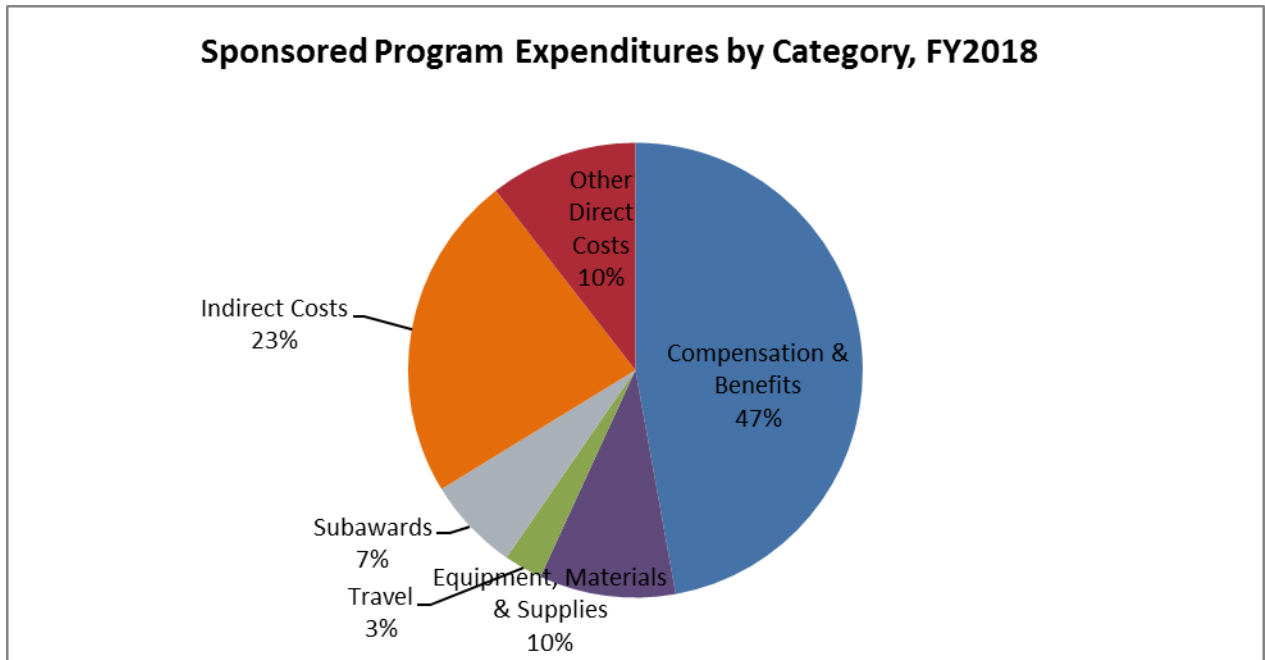
4.2 Comparison of FY2018 and FY2017 expenditures

**Worcester Polytechnic Institute
Comparative Summary of Sponsored Program Expenditure Activity
FY2018 and FY2017**

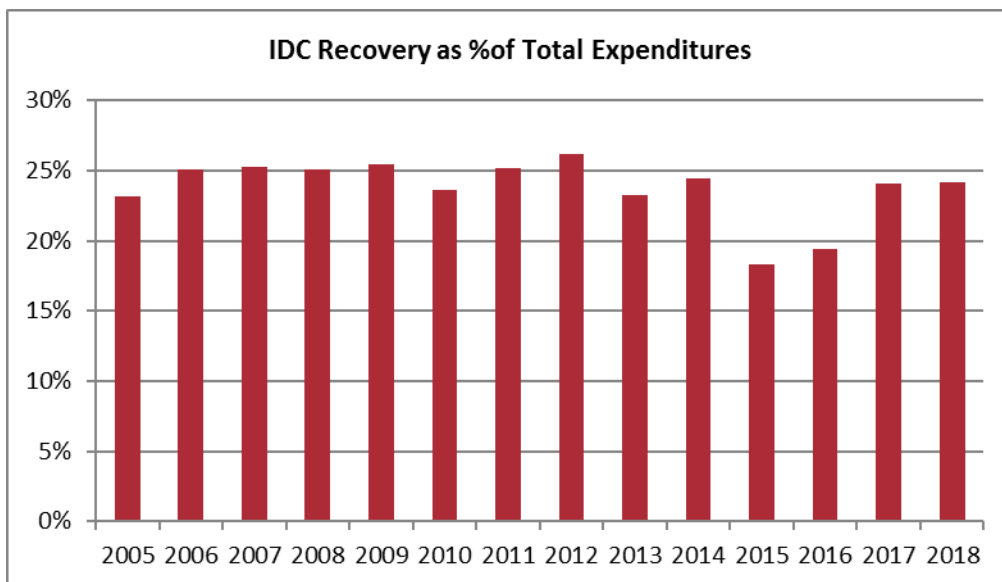
<u>Element of Cost</u>	<u>FY2018 Expenses</u>	<u>FY2017 Expenses</u>	<u>% Change</u>
Salaries & Wages	\$8,431,966	\$8,195,375	2.9%
Fringe Benefits	1,284,177	1,265,784	1.5%
Equipment	1,494,297	1,265,784	18.1%
Other Direct Expenses	<u>7,727,462</u>	<u>8,737,182</u>	-11.6%
Subtotal Direct Program Costs	\$18,937,902	\$19,464,126	-2.7%
Indirect Costs	<u>5,728,750</u>	<u>5,833,710</u>	-1.8%
Total Program Costs	\$24,666,651	\$25,297,835	-2.5%
Less: WPI Cost Sharing ¹	<u>(969,911)</u>	<u>(1,078,831)</u>	-10.1%
Net Externally-sponsored Expenditures	<u>\$23,696,741</u>	<u>\$24,219,004</u>	-2.2%

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 2018

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	14	8	57%	39	2.79	\$ 3,051,221	\$ 824,516	\$ 217,944	\$ 58,894
CBC	12	5	42%	6	0.50	1,471,733	447,395	122,644	37,283
CS	30	14	47%	26	0.87	4,193,675	1,097,248	139,789	36,575
H&A	28	1	4%	1	0.04	92,072	6,820	3,288	244
MA	25	8	32%	12	0.48	1,296,785	273,229	51,871	10,929
PH	12	5	42%	7	0.58	4,734,314	70,988	394,526	5,916
SSPS	13	2	15%	4	0.31	1,166,001	155,951	89,692	11,996
A&S Totals	134	43	32%	95	0.71	16,005,800	2,876,147	119,446	21,464
Business	22	4	18%	5	0.23	203,895	54,750	9,268	2,489
Engineering									
BME	11	7	64%	14	1.27	2,498,669	755,782	227,152	68,707
CHE	13	5	38%	10	0.77	1,254,479	351,807	96,498	27,062
CEE	12	5	42%	7	0.58	447,064	53,327	37,255	4,444
ECE	16	8	50%	14	0.88	995,325	260,732	62,208	16,296
FPE	4	3	75%	7	1.75	268,626	92,766	67,157	23,191
ME	38	16	42%	47	1.24	8,269,692	1,693,903	217,623	44,576
Engineering Totals	94	44	47%	99	1.05	13,733,855	3,208,317	146,105	34,131
IGSD	1	0	0%	1	1.00	68,448	24,729	68,448	24,729
TOTALS	251	91	36%	200	0.80	\$ 30,011,998	\$ 6,163,943	\$ 119,570	\$ 24,558
STEM Departments	200	86	43%	193	0.97	\$ 29,647,583	\$ 6,077,644	\$ 148,238	\$ 30,388

5.2: Faculty Proposal Activity by PI Department

Worcester Polytechnic Institute
 Proposal Productivity by Department (Tenured & Tenure Track Faculty as PI Only)
 Fiscal Year 2018

Department	# of faculty	# submitting proposals	% submitting proposals	# of Proposals	Proposals Per Faculty Member	Total \$ Proposed	\$ requested per faculty member	\$ requested per submitting faculty member	Average proposal amount
Arts & Sciences									
BBT	14	5	36%	13	0.93	\$ 5,310,899	\$ 379,350	\$ 1,062,180	\$ 408,531
CBC	12	7	58%	17	1.42	14,202,748	1,183,562	2,028,964	835,456
CS	30	21	70%	62	2.07	54,833,838	1,827,795	2,611,135	884,417
H&A	28	3	11%	5	0.18	940,449	33,587	313,483	188,090
MA	25	18	72%	28	1.12	10,369,940	414,798	576,108	370,355
PH	12	5	42%	12	1.00	8,981,735	748,478	1,796,347	748,478
SSPS	13	6	46%	12	0.92	10,142,311	780,178	1,690,385	845,193
A&S Totals	134	65	49%	149	1.11	104,781,920	781,955	1,612,030	703,234
Business	22	7	32%	17	0.77	6,415,282	291,604	916,469	377,370
Engineering									
BME	11	8	73%	29	2.64	16,159,716	1,469,065	2,019,965	557,232
CHE	13	8	62%	32	2.46	13,069,970	1,005,382	1,633,746	408,437
CEE	12	7	58%	11	0.92	2,190,107	182,509	312,872	199,101
ECE	16	1	6%	18	1.13	5,679,170	354,948	5,679,170	315,509
FPE	4	2	50%	7	1.75	3,251,568	812,892	1,625,784	464,510
ME	38	19	50%	70	1.84	39,198,814	1,031,548	2,063,095	559,983
Engineering Totals	94	45	48%	167	1.78	79,549,345	846,270	1,767,763	476,343
IGSD	1	0	0%	0	0.00	-	-	-	-
TOTALS	251	117	47%	333	1.33	\$ 190,746,547	\$ 1,919,828	\$ 759,946	\$ 7,649
STEM Departments	200	107	54%	311	1.56	\$ 183,390,816	\$ 1,594,637	\$ 916,954	\$ 7,973

6. Success of FY2017 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 2018 proposals have fared – many of them are awaiting a decision. We can, however, look at our proposals from FY 2017, which have had ample time to be reviewed by the funding agencies.

The success rates for FY 2016 proposals are shown in figures 6.1 and 6.2 below.

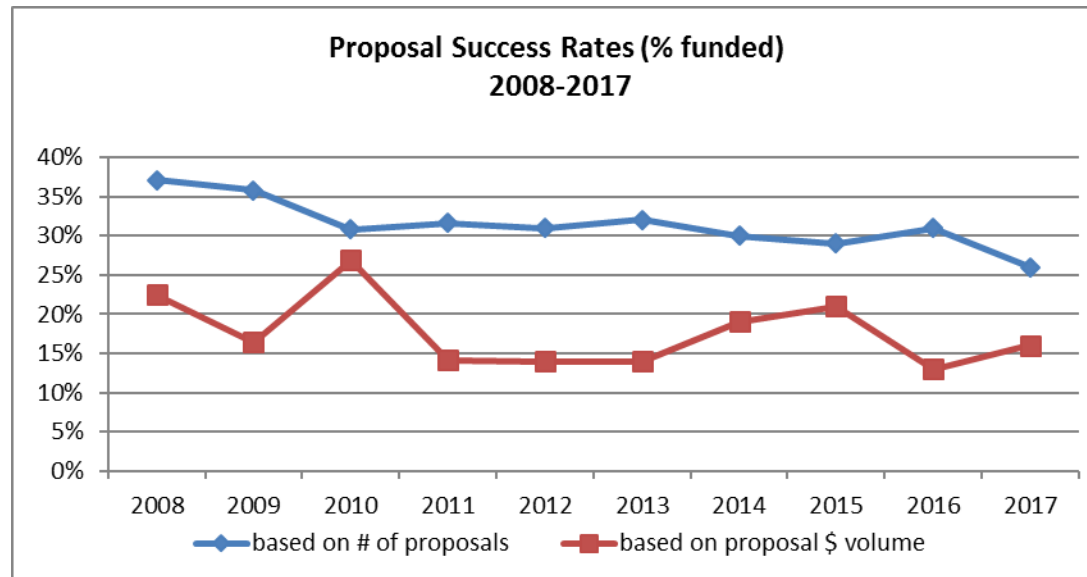
Figure 6.1

**Worcester Polytechnic Institute
Status of Proposals Submitted in FY 2017**

Status	Number	%	\$ Value ¹	%
Funded	97	26%	\$ 35,102,570	16%
Declined	205	55%	\$ 144,554,349	67%
Pending	70	19%	\$ 35,222,610	16%
Total	372	100%	\$ 214,879,529	100%

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

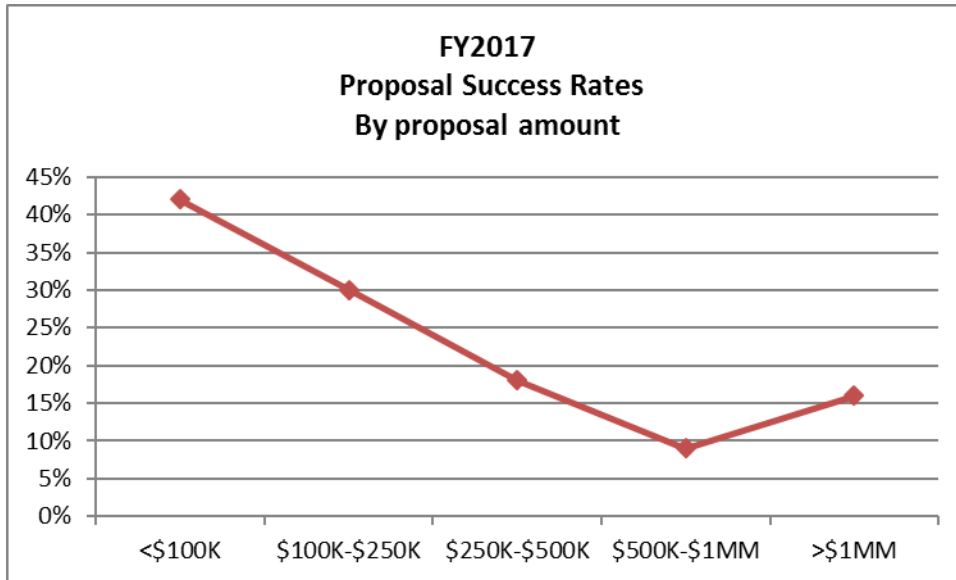
Figure 6.2



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, 2016 to June 30, 2017

	<u><\$100K</u>	<u>\$100K-\$250K</u>	<u>\$250K-\$500K</u>	<u>\$500K-\$1MM</u>	<u>>\$1MM</u>
Awarded	42%	30%	18%	9%	16%
Declined	40%	46%	69%	71%	69%
Pending	18%	24%	13%	20%	15%
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 7.1

Worcester Polytechnic Institute Ten-Year Historical Summary of Sponsored Program Activity FY2009 (Base Year) to FY2018											
Fiscal Year	Proposal Volume				Award Volume				Expenditure Volume		
	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 2009	274	91,400,387			126	14,631,997			12,129,731		
2010	344	185,350,701	102.8%	102.8%	152	17,374,461	18.7%	18.7%	15,117,369	24.6%	24.6%
2011	288	113,086,144	-39.0%	23.7%	136	18,072,893	4.0%	23.5%	17,629,987	16.6%	45.3%
2012	340	207,378,461	83.4%	126.9%	140	18,149,913	0.4%	24.0%	14,819,675	-15.9%	22.2%
2013	345	148,079,871	-28.6%	62.0%	146	25,121,063	38.4%	71.7%	18,379,939	24.0%	51.5%
2014	376	165,351,904	11.7%	80.9%	159	32,993,647	31.3%	125.5%	21,722,725	18.2%	79.1%
2015	379	241,028,388	45.8%	163.7%	194	34,283,312	3.9%	134.3%	28,663,914	32.0%	136.3%
2016	391	224,319,427	-6.9%	145.4%	192	23,089,534	-32.7%	57.8%	29,734,091	3.7%	145.1%
2017	388	204,973,028	-8.6%	124.3%	205	25,735,268	11.5%	75.9%	24,219,004	-18.5%	99.7%
2018	366	202,210,057	-1.3%	121.2%	205	32,968,562	28.1%	125.3%	23,696,740	-2.2%	95.4%

Appendix: Historical and Supplementary Data

Figure A.1: Proposal/Award \$ Volumes

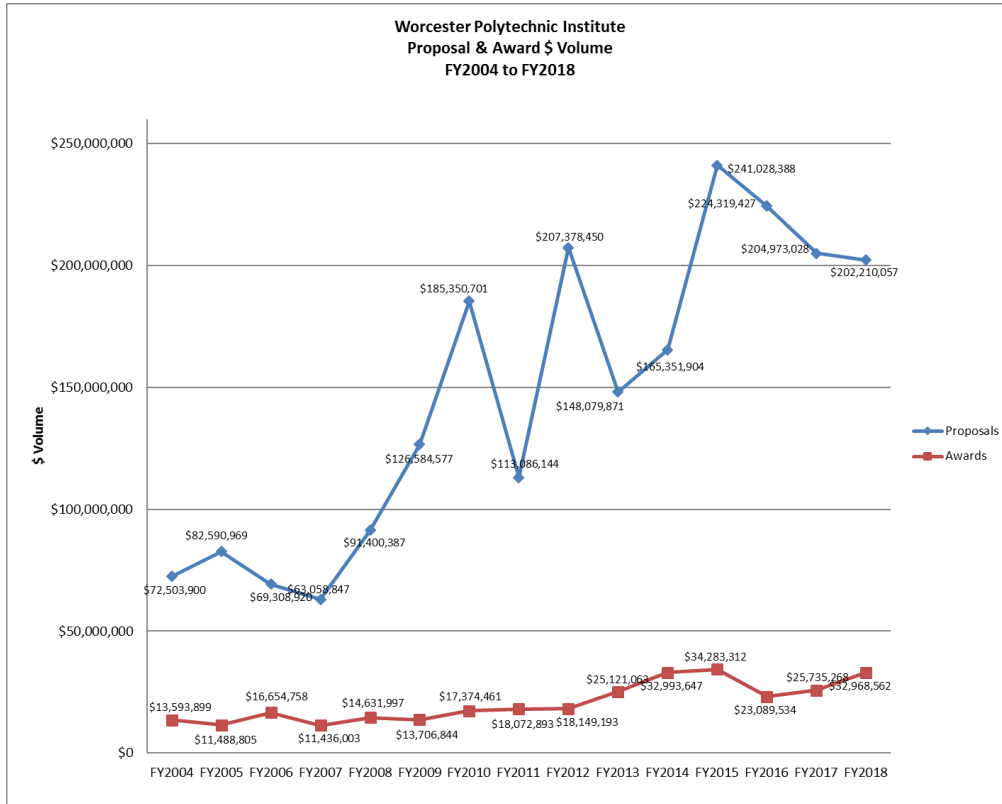


Figure A.2: Proposal/Award Counts

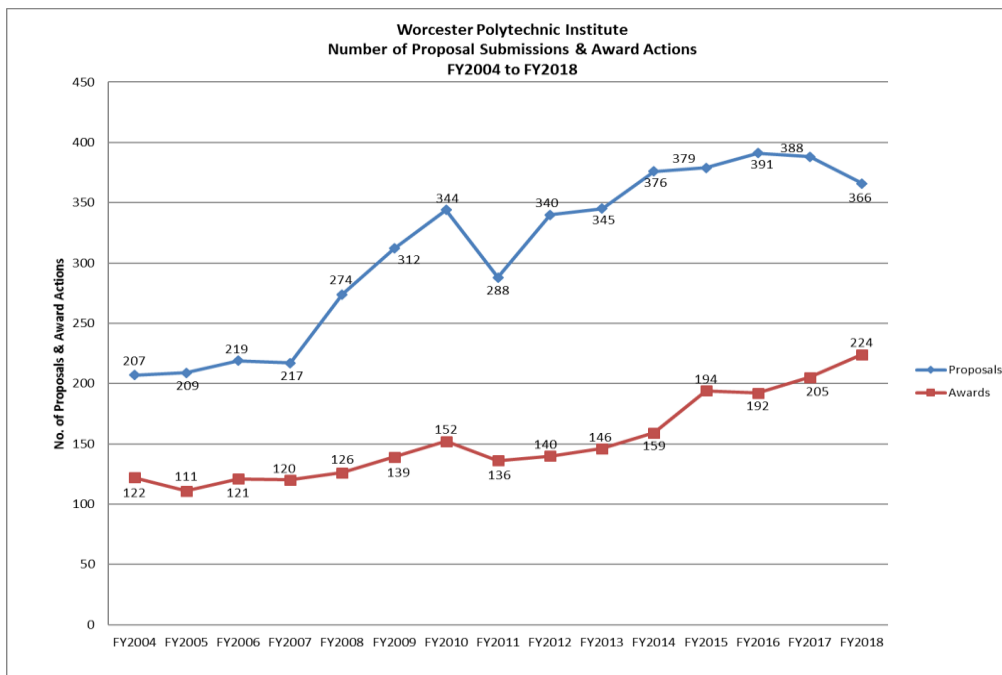


Figure A.3: Ten-year departmental proposal/award trends

