

## Part I: University Transportation Program-Wide Performance Indicators

UTC Name: Center for Connected and Automated Transportation

University: University of Michigan

Grant #: 69A3551747105

Reporting Period: April 1, 2019 - September 30, 2019

### OSTR Goals

METRIC	Research Performance Measures	Consortium Total	University of Michigan	Purdue University	University of Illinois Urbana Champaign	Washtenaw Community College	University of Akron	Central State University
1. Number of transportation-related courses offered during the reporting period that were taught by faculty and/or teaching assistants who are associated with the UTC.	Undergraduate courses	12.5	3	3.5	3	0	2	1
	Graduate courses	18	6	7	3	0	2	0
2. Number of students participating in transportation research projects during the reporting period funded by this grant.	Undergraduate students in research	21	11	2	2	0	4	2
	Graduate students in research	50	17	22	6	0	5	0
3. Number of transportation-related advanced degree programs that utilize grant funds during the reporting period to support graduate students.	Masters level programs	13	3	6	3	0	1	0
	Doctoral level programs.	14	5	6	2	0	1	0
4. Number of students supported by this grant during the reporting period.	Undergraduate degrees	10	3	2	2	0	1	2
	Masters degrees	19	5	9	3	0	2	0
	Doctoral degrees	28	7	15	4	0	2	0
5. Number of students supported by this grant who received degrees during the reporting period.	Undergraduate degrees	5	1	2	0	0	0	2
	Masters degrees	4	1	2	0	0	1	0
	Doctoral degrees	3	0	3	0	0	0	0
6. Number and total dollar value of research projects selected for funding during the reporting period using UTC grant funds (Federal and/or Recipient Share) that you consider to be applied research and advanced research.	Number of applied research projects	12	6	5	1	0	0	0
	Dollar value of applied research projects	\$2,483,192	\$1,551,332	\$551,860	\$380,000	\$0	\$0	\$0
	Number of advanced research projects	9	0	2	3	0	2	2
	Dollar value of advanced research projects	\$1,429,539	\$0	\$134,716	\$1,050,000	\$0	\$194,955	\$49,868

## Part II: CCAT UTC Specific Performance Indicators

UTC Name: Center for Connected and Automated Transportation  
 University: University of Michigan  
 Grant #: 69A3551747105  
 Reporting Period: April 1, 2019 - September 30, 2019

### Technology Transfer Goals

1. OUTPUTS	Research Performance Measures	Consortium Total	University of Michigan	Purdue University	University of Illinois Urbana Champaign	Washtenaw Community College	University of Akron	Central State University
1.A. Disseminate research results through publications, conference papers, and policy papers	Technical reports	4	1	2	0	0	0	1
	Papers at conferences, symposia, workshops, and meetings	73	12	48	7	0	3	3
	Peer-reviewed journal articles	30	8	18	4	0	0	0
1.B. Develop inventions, new methodologies, or products	Annual number of research deployments	4	2	1	0	0	1	0
1.C. Research projects funded by sources other than UTC and matching fund sources	Number of projects	35	15	11	9	0	0	0
	Dollar amount of projects	\$7,288,137	\$5,054,393	\$803,744	\$1,430,000	\$0	\$0	\$0
2. OUTCOMES	Research Performance Measures							
2.A. Incorporate new technologies, techniques or practices	Number of technology transfer activities that offer implementation or deployment guidance	6	5	0	0	0	1	0
2.B. Improve the processes, technologies, techniques in addressing transportation issues	Number of research deliverables disseminated from each research project	9	4	4	1	0	0	0
3. IMPACTS	Research Performance Measures							
3.A. Increase the body of knowledge and safety of the transportation system	Number of instances of technology adoption or commercialization	2	1	0	1	0	0	0
	Number of conferences organized by the CCAT consortium members	21	6	12	3	0	0	0
3.B. Improve the operation and safety of the transportation system	Number of instances of research changing behavior, practices, decision making, policies (including regulatory policies), or social actions	3	1	2	0	0	0	0

### Leadership Development Goals

1. OUTPUTS	Research Performance Measures							
1.A Keynote speeches or invited speaker presentations	Number of media engagements	24	3	0	3	18	0	0
	Number of academic engagements	102	31	43	15	8	4	1
	Number of industry engagements	71	32	0	8	31	0	0
2. OUTCOMES	Research Performance Measures							
2.A Leadership positions held	Regional organizations	27	2	7	4	12	2	0
	National organizations	18	3	9	1	5	0	0
	International organizations	13	1	6	4	1	1	0
2.B CCAT affiliated students holding leadership positions	Number of students	29	11	2	1	15	0	0

### Education and Workforce Development Goals

1. OUTPUTS	Research Performance Measures							
1.A Number of Workforce Online learning modules created and developed toward the certification of completion training for the emerging CAT field technician	Number of learning modules	26	0	0	0	26	0	0
1.B Development of Articulation agreements for C++ software programs and Applied Data Science program with partner institutions	Number of Articulation/Transfer Programs	13	0	0	0	13	0	0
1.C Development of an active WCC Pre-Engineering Program in STEM disciplines leading to an AAS degree	Number of students completed Associates Degree for Pre-Engineering Science Transfer	167	0	0	0	167	0	0
	Number of students completed Associates Degree for Engineering Technologist-Manufacturing Degree	18	0	0	0	18	0	0
1.D Number of curriculum development and professional development activities for instructors in related CAT technologies	Number of Professional Dev. Activities in IT [CAT]	17	0	0	0	16	0	1
	Number of participants	45	0	0	0	45	0	0
1.E Number of K-12 Career pathways activities related to CAT career fields.	Number of K-12 Activities in CAT Career Areas	22	1	12	0	9	0	0
	Number of participants	646	40	240	0	366	0	0

### Outreach Goals

1. OUTPUTS	Research Performance Measures							
1.A Media stories referencing CCAT, CCAT research or other	Number of media stories	36	17	0	1	18	0	0
	Number of newsletters	28	2	12	0	14	0	0
	Number of press releases	0	0	0	0	0	0	0
1. B Newsletters, press releases, and website	Number of website hits	14956	2837	240	0	11879	0	0
	2. OUTCOMES	Research Performance Measures						
2.A Research Champions	Industry principals	16	5	10	0	0	1	0
	Number of industries represented	310	4	304	0	0	2	0
	Government principals	14	1	12	0	0	1	0
	Number of government agencies represented	14	1	12	0	0	1	0

### Collaboration Goals

1. OUTPUTS	Research Performance Measures							
1. A Collaboration with other agencies	Number of agencies providing matching funds	10	0	8	1	0	1	0
	Number of agencies participating in CCAT events	68	28	2	1	37	0	0
	Number of agencies committed to CCAT projects	42	0	2	1	37	2	0
	Number of individuals from external agencies attending CCAT events	695	620	0	0	75	0	0
1. B Collaboration with other organizations	Number of organizations providing matching funds	29	12	16	0	0	1	0
	Number of organizations participating in CCAT events	87	38	12	0	37	0	0
	Number of organizations committed to CCAT Projects	85	4	42	0	37	2	0
	Number of individuals from external organizations attending CCAT events	2001	1868	58	0	75	0	0