New York State Centers of Excellence and Centers for Advanced Technology

2021 Virtual Legislative Briefing
January 13, 2021

From Campus to Commercialization

"I want this state to provide the synergy and network for commercialization between academia and private sector."

Governor Andrew M. Cuomo
September 25, 2018

15 Centers for Advanced Technology

Institution	Center
Alfred University	Center for Advanced Ceramic Technology
Binghamton University	Center for Flexible Hybrid Medical Device Manufacturing (FlexMed)
Binghamton University	Integrated Electronics Engineering Center (IEEC)
Clarkson University	Center for Advanced Materials Processing (CAMP)
Cornell University	Center for Life Science Enterprise
CUNY	Center for Advanced Technologies in Sensors for Exploration of Natural Systems and Environments (ASRC CAT)
New York University	Center for Advanced Technology in Telecommunications and Distributed Information Systems (CATT)
Rensselaer Polytechnic Institute	Center for Future Energy Systems (CFES)
Rochester Institute of Technoloy	Additive Manufacturing and Multifunctional Printing (AMPrint) Center
Stony Brook University	Center for Biotechnology (CFB)
Stony Brook University	Center for Integrated Electric Energy Systems (CIEES)
SUNY Polytechnic Institute	Center for Advanced Technology in Nanomaterials and Nanoelectronics (CATN2)
Syracuse University	Center for Advanced Systems and Engineering (CASE)
University at Buffalo	Center for Advanced Technology in Big Data & Health Sciences (UB CAT)
University of Rochester	Center for Emerging and Innovative Sciences (CEIS)

14 Centers of Excellence

Institution	Center
Binghamton University	Small Scale Systems Integration and Packaging Center (S3IP)
Clarkson University, SUNY ESF	Center of Excellence in Healthy Water Solutions
Cornell University	Center of Excellence for Food and Agriculture
New York Medical College	Center of Excellence in Precision Medicine and Responses to Bioterrorism and Disasters
NYU, RIT and RPI	Center of Excellence in Digital Gaming
Rochester Institute of Technology	Center of Excellence in Advanced & Sustainable Manufacturing (COE-ASM)
Stony Brook University	Advanced Energy Research and Technology Center (AERTC)
Stony Brook University	Center of Excellence in Wireless and Information Technology (CEWIT)
SUNY Polytechnic Institute	Center of Excellence in Nanoelectronics and Nanotechnology (CENN)
Syracuse University	Center of Excellence in Environmental and Energy Systems (SyracuseCoE)
University at Albany	Center of Excellence in Atmospheric and Environmental Prediction and Innovation
University at Buffalo	Center of Excellence in Bioinformatics and Life Sciences (CBLS)
University at Buffalo	Center of Excellence in Materials Informatics (CMI)
University of Rochester	Center of Excellence in Data Science

Efficient & Effective Economic Investment

- In the last 3 years (2017-2019 ESD annual reports), the CATs and COEs have helped **create and retain 9,816 jobs** and generate **$2.57 billion in economic impact**, with a **25:1 to 45:1 ROI** annually

- The Centers are **strategically located across every region in the State**, utilizing and enhancing each region's unique strengths, helping provide a statewide approach to economic recovery, and ensuring each region's needs are met

- Each CAT/COE is **funded by a 1:1 match by a university or corporate sponsor**, so every state dollar in funding is leverages an additional dollar in investment by a university and/or corporation, **doubling the impact**.

State Budget

- The 2019-20 NYS Budget included $26.7M for the CATs and COEs
  - Approximately $1M for each COE and $960,400 for each CAT
- In the 2020-2021 NYS Budget, Governor Cuomo proposed **eliminating all 14 COEs and slashing funding** to just $19.5M
  - CATs and COEs would have been forced to compete against each other for 1 of 15 Centers under the cut and consolidation proposal that did not include any details on application and selection process.
- The State Legislature **rejected the Governor's proposal** and was able to partially restore $23.5M in funding to the CATs and COEs
  - Approximately $866,612 for each COE and $864,066 for each CAT

CAT/COE Response to COVID-19

- Centers involved in more than 81 COVID-related projects
  - We have supported research into vaccinations and therapies
  - We have addressed testing shortages through research into high-sensitivity reagent-sparing assays, contactless temperature detection, and materials processing for high volume distribution of tests
  - We have partnered with NYSTAR to offer reopening guidance to businesses and educational institutions through webinars
- Of these 81 projects, **23 (28%) involve COEs and might not have happened** if the Governor's proposal to eliminate the COEs was adopted in the enacted budget.

2020 State Technology & Science Index

State	Rank	Score	Tier	State	Rank	Score	Tier
Massachusetts	1	86.57	1	Minnesota	11	64.13	2
Colorado	2	82.27	1	Connecticut	12	64.11	2
California	3	80.12	1	Pennsylvania	13	61.74	2
Maryland	4	77.93	1	New Jersey	14	61.5	2
Washington	5	74.73	1	North Carolina	15	60.42	2
Utah	6	74.2	1	Texas	16	59.71	3
New Hampshire	7	67.27	2	Arizona	17	57.79	3
Virginia	8	67.2	2	New Mexico	18	57.78	3
Delaware	9	66.01	2	Michigan	19	57.69	3
Oregon	10	64.23	2	Illinois	20	56.36	3
				New York	**21**	**56.15**	**3**

CAT/COE Success Stories

- **Norma Nowak**, Center of Excellence in Bioinformatics & Life Sciences, University at Buffalo

- **Ben Chang**, Center of Excellence in Digital Game Development, RPI

- **Peter Zaehringer**, Center for Advanced Systems & Engineering (CASE), Syracuse University

Thank You

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