Centers of Excellence and Centers for Advanced Technology
Testimony for Economic Development Budget Hearing
February 23, 2021

Background:

New York is home to 15 Centers for Advanced Technology (CATs) and 14 Centers of Excellence (COEs). Both CATs and COEs provide New York State companies access to faculty expertise, talented students, leading edge technology, and programs vital to the growth of their businesses. The Centers enable industry partners to commercialize new products, improve manufacturing processes, bring new drugs to market, identify areas of growth potential, and much more. While both CATs and COEs bridge critical gaps between academia and industry, they do so with distinct, yet complementary differences.

The CATs were created in 1983 in order to promote collaboration between private industry and universities in the development and application of new technologies (Public Authorities Law § 3102-b). NYSTAR identifies technology fields of strategic importance to New York's economic competitiveness and awards 10-year CAT designations to New York universities, university-affiliated research institutes, or consortia of such institutions.

The Centers of Excellence were initially created in the 2002-2003 state budget, then later solidified into statue in 2011 with legislation sponsored by Assemblywoman Donna Lupardo that passed both the Assembly and Senate unanimously before being signed into law by Governor Cuomo (Ch. 162 of 2011). The COEs were established “for the purpose of fostering collaboration between the academic research community and the business sector to develop and commercialize new products and technologies” (Economic Development Law § 410).

One of the most basic, but key, differences between the Centers is the CATs develop new technologies in collaboration with, and through the support of, private industry. CATs require matching funds from private industry for their research and development efforts.

Unlike the CATs, the COEs are instead required to match the state investment with university funds. Without the need for a corporate match, COEs are able to work with smaller and new businesses, including startups, that do not have a research and development budget. In addition to their focus on the commercialization phase of technology with private industry, the COEs also work to promote critical private sector investment in emerging high-tech fields and to create and expand technology-related businesses and employment.

While there are differences, they are complementary and the Centers collaborate often. CATs and COEs have partnered with some of the nation’s largest companies and these relationships are invaluable to the small businesses they foster. Likewise, the mentoring and support offered by the CATs and COEs give New York businesses a competitive advantage in local and global markets.

CATs and COEs provide critical support to the third-largest tech sector in the nation and have helped spur 80% growth in this sector since 2009.[1] Combined funding for CATs and COEs reached approximately $26.7 million annually in the 2019-2020 adopted state budget: $12.3 million for the COEs and $14.4 million for the CATs.

This modest amount of funding has an outsized impact. According to the 2017-2019 ESD annual reports, the CATs and COEs helped create and retain 9,816 jobs. In that 3-year period, the estimated non-job related economic impacts amount to $2.57 billion. The results are astonishing, with an annual return on investment ranging from 25:1 to 45:1.

During the last year, the CATs and COEs played an important role in the State's response to the pandemic. The CATs and COEs collaborated with industry on more than 80 COVID-related projects. These included testing, PPE, HVAC, and more. This rapid response to the sudden and unexpected demands of COVID-19 demonstrates the resiliency of the CATs and COEs and the value they can provide to industries that are newly emerging and rapidly evolving.

As New York looks to rebuild its economy from the pandemic, it is critical that we do not fall further behind other states. In recent years, New York has declined in innovation rankings, such the Bloomberg Innovation Index and the Milken institute's State Technology and Science Index. These rankings look at R&D activity, patents filed, companies in technology, productivity, and STEM jobs, as well as residents with science or engineering degrees. New York dropped 2 spots in the 2020 Bloomberg Innovation Index to 14th.[2] In the 2020 State Technology and Science Index, New York fell 5 spots in the last 2 years to 21st and had previously ranked as high as 11th back in 2014.[3] Not only are New York's rankings declining, but our neighboring states, including New Jersey, Connecticut and Massachusetts continue to perform much better, increasing the challenge for New York to attract and retain entrepreneurs, businesses and academic talent.

ESD's reporting has consistently demonstrated that CATs/COEs are among the best programs the State has for job creation and economic growth. Since ESD has not released a 2020 annual report, we have attached a summary of the 2019 job creation programs funded by New York State, which includes the amount for which each program is funded, the jobs created and retained, and the return on investment. It is no surprise that CATs/COEs are among the very top performers. Further, these programs are time-tested and have delivered such results for several years. The CAT and COE programs are simply unmatched in their ability to grow critical economic sectors, promote job creation and retention, and provide enormous financial returns to the state.

Executive Budget proposal:

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[1] https://www.osc.state.ny.us/osdc/rpt1-2020.pdf
[2] https://www.bloomberg.com/news/articles/2020-06-22/california-massachusetts-rank-as-most-innovative-u-s-states
[3] https://statetechandscience.org/statetech.taf?page=ranking-by-year

Governor Cuomo's 2021-2020 Executive Budget proposal eliminates the Centers of Excellence program and would convert all 14 COEs to CATs temporarily for a 2-year period. The newly consolidated CATs would then be required to compete for 10-year CAT awards. Under this proposal, funding for the combined program would be cut by 19%--from $23.5 million in 2020-21 to $19 million in 2021-22.

The proposed cut and consolidation in the executive budget proposal would heavily impede the economic growth these Centers generate by weakening investment in academic-industry collaborations, including commercialization and workforce development. We respectfully request that the state Senate and Assembly reject the executive budget proposal to eliminate the Centers of Excellence. In addition, we ask the State Legislature restores funding from the $19 million in the executive budget proposal to last year's combined total of $23,593,165: $10,631,785 for the COEs and $12,961,380 for the CATs.

<u>The Legislature should REJECT the governor's proposal:</u>

- Complementary differences are key to the successes of CATs and COEs:
    - Rather than a one-size-fits-all approach, the CATs and COEs both build on the unique strengths, assets, and needs of each region across the state.
    - The CATs require corporate matching funds, which helps leverage private sector investment to maximize the returns on the state investment.
    - Since the COEs only require an institutional match the college or university, they have more flexibility than the CATs, which can help them work with startups and smaller companies whose budgets wouldn't allow for research funds.
    - Switching to a strictly competitive approach for the Centers would eliminate specialties and create a hole in the economic development ecosystem.

- The governor's proposal has significant implementation issues:
    - CATs currently are awarded 10-year designations. In 2 years, under the governor's proposed competition, there would be 14 10-year contracts awarded to the new CATs. With 29 current CATs and COEs, this competition is a risky multi-million dollar bet that would award nearly half of the 10-year contracts all at once. Furthermore, by not staggering awards, colleges and universities would only have one chance to apply before having to wait several years for the next opportunity.
    - A competitive process would disadvantage small/newer centers. As discussed, COEs were established in 2011; that is many years after the original CATs, which have had decades to cultivate relationships and establish partnerships. Additionally, some COEs have formed in the last few years and therefore lack the economic impact of other, more mature centers.
    - The governor's proposal includes no metrics on how CATs/COEs would be evaluated. While it is reasonable to establish performance criteria for CATs/COEs, since none of the CATs/COEs have the same technology focus, how will the governor measure performance? Likewise, given their differing fields, a single standard is bound to disadvantage some centers over others, despite success

relative to the center's own field. Establishing consistent and transparent performance criteria would have to be established first before suggesting to consolidate CATs/COEs into one new program.
  - The CATs/COEs support start-up businesses financially on campus, which rely on stable funding sources to launch their companies. If the program moves to a competitive process, how would those companies rely on funding from their CAT/COE?

- We should be increasing investments in the high technology sector, not cutting one of our most successful programs:
  - New York continues to decline in innovation indexes by Bloomberg and the Milken Institute, while neighboring states, such as New Jersey, Connecticut and Massachusetts rank considerably higher and are better positioned to attract entrepreneurs, companies, academic talent, and venture capital investment.
  - CATs/COEs are among the most cost effective economic development programs in the State, with returns many times the monies invested, cutting a program that works better than the majority of other economic development programs is foolish.
  - CATs/COEs have a long track records of success in job creation and retention. They have worked with some of the largest companies in the nation and fostered growth in innumerable businesses.
  - CATs/COEs provide a competitive advantage to the State because they are a critical link for start-up businesses to access resources and leverage relationships that promote growth.
  - New York's technology sector is growing at one of the highest rates in the nation; cutting one of its most successful job creation programs is a self-inflicted injury that will have significant repercussions for job growth and could lead to startups leaving New York for others states.

- CATs/COEs provide substantial non-economic benefits to their universities and communities
  - CATs/COEs offer skills training and job opportunities to the student bodies of their host institutions, giving New York students opportunities they cannot find anywhere else.
  - CATs/COEs prevent "brain drain" and keep New York students in New York to pursue their business dreams.
  - CATs/COEs build cultural capital in their communities by drawing highly educated people to partner with the centers.
  - CATs/COEs foster innovation by connecting disparate skill sets and diverse people through their economic hub.