



# Year In Review

## 2022

*The National Manufacturing Innovation Institute Driving American Advanced Manufacturing Into the Future Through Technology and Talent Development*

### Summary

LIFT, the Detroit-based national manufacturing innovation institute strengthened its ongoing work of Driving American Manufacturing Into the Future Through Technology and Talent Development throughout 2022. LIFT finished 2022 with more than 340 members of its ecosystem, 54 of which were actively under contract working on projects, speaking to the value of the public-private partnership between industry, academia and government. LIFT also continues to support that ecosystems with 75% of its funding being sent back out into its ecosystem to move the needle in advanced manufacturing technology and talent.

Celebrating its 9<sup>th</sup> birthday in 2023, LIFT continues to show it is a responsible steward of federal dollars and showcases the value of the public-private partnership model and the mission of enhancing our national economy and national security.

### The LIFT Impact – 2022 Highlights

LIFT leaned into its focus areas of Materials Research, Manufacturing Processes, Systems Engineering and Talent Development in 2022 by expanding its reach in each of those areas by continuing to connect industry, academia and government to achieve the collective goal of Driving American Manufacturing Into the Future.

#### Technology



LIFT continued its work in extreme environments materials development by launching a Hypersonics Challenge with the DoD Manufacturing Technology Program, kicking off projects critical to the materials science and manufacturing process of hypersonic flight.

#### Talent



LIFT rolled out Operation Next to more locations across the nation providing advanced manufacturing-focused skilled-trades credentialing opportunities for transitioning servicemembers, National Guard and Reserve Members, military spouses & families and veterans.

#### Ecosystem Expansion



LIFT, together with the Office of the Secretary of Defense, the Department of Economic Development and Commerce of Puerto Rico (DEDC) and Governor Pierluisi, announced its intentions to launch a satellite for advanced applied research and development on the island.

#### Government Partnership



LIFT continued to partner with the federal government for the advancement of manufacturing across the nation, including actively participating on two White House committees to provide the voice of industry to our national leaders.



## Technology

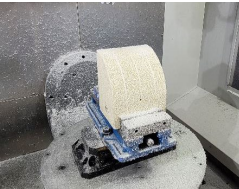
### *LIFT – Leading Innovations For Tomorrow*



LIFT's technology program worked to accelerate technology advancements in support of the warfighter and industry throughout 2022

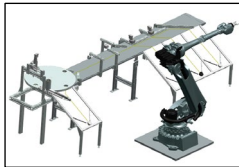
In 2022, the LIFT Technology team:

- ▲ Opened 19 Projects - Totaling \$44,342,650
- ▲ Closed 10 Projects - Totaling \$1,006,044
- ▲ Added six additional projects ready for launch - Totaling \$29,732,534
- ▲ Added seven new LIFT team members, including Program Managers and Engineers



The team also:

- ▲ Developed a new compute cluster on site in Corktown, enabling our team to do more simulations faster - Computational power exceeding 50 LIFT laptops combined!
- ▲ Commissioned a new Additive Manufacturing Cell at LIFT Detroit, including a EOS M290 Laser Beam Powder Bed Fusion machine and a SPEE3D LIGHTSPEE3D cold spray machine
- ▲ Commissioned the Digital Twin Experience, which supports both Talent Development and Smarter Manufacturing activities and is available for use by its members



## Talent

### *LIFT – Learning Innovations For Tomorrow*

The LIFT talent development team expanded its reach to students across the country – from high schools to incumbent workers to servicemembers and their families.

In 2022, the LIFT talent team:

- ▲ Hosted hundreds of students for National Manufacturing Day, at the LIFT facility in Detroit that included tours and technology experiences
- ▲ Successfully piloted its JumpStart Career Exploration Program to high school students in Flint and Detroit, Michigan
- ▲ Expanded Operation Next to a total of 14 locations across the country and Puerto Rico to provide critical skilled trades training to the U.S. workforce
- ▲ Continued to provide the IGNITE program thru the LIFT Learning Lab to students from Leona Group and University Prep Science and Math High School
- ▲ Continued to host hundreds of students on field trips and other community activities in the LIFT Learning Lab, providing exposure to the world of advanced manufacturing

