The Overview

GlobalFoundries (GF) is one of the world's leading computer chip manufacturers with its most advanced semiconductor facility in Malta, New York. Crucial to the 24-7 operation of this 300mm, leading-edge semiconductor manufacturing facility are maintenance technicians, whose duties include monitoring, sustaining, and improving the equipment and/or processes. Their work, mostly in cleanroom environments, includes performing preventive, corrective maintenance on semiconductor equipment as well as monitoring, controlling, and testing it for manufacturing readiness.

The Situation

GF employs maintenance technicians of varying skill levels in Malta. To meet the demand for these skilled workers, the manufacturer relies on a talent pipeline consisting of students graduating with associate's degrees in fields such as electrical engineering or mechatronics, as well as individuals coming with technical experience from other industries, such as automotive. Service members leaving the military for civilian careers are another major talent pipeline for the company.

The Solution

Wanting to broaden its talent pipeline for maintenance technicians, GF launched a first-of-its-kind apprenticeship program for the semiconductor manufacturing industry. To create this Maintenance Technician Apprenticeship Program, GF partnered with the Center for Economic Growth (CEG), Hudson Valley Community College (HVCC), the Manufacturers Association of Central New York (MACNY), and the National Institute for Innovation and Technology (NIIT).

“This program widens the pool of candidates to people who don’t have prior experience. Our only requirements are a high school diploma or equivalent, and mechanical interest.”

Tara McCaughey
GF's U.S. Workforce Development Lead
In January 2021, GF began internally registering employees in the Industry Approved Apprenticeship Program (IAAP), and the program was later opened to non-employees. For the program, maintenance technician apprentices undergo 2,700 hours of paid on-the-job training over about 16 to 24 months, with all work hours counting towards that goal. They also receive related instruction from HVCC through online courses as well as in-person lab work at the HVCC North Campus in Malta, near the GF facility.

CEG serves as a group sponsor for this New York State-registered apprenticeship. That means CEG works as an intermediary with the New York State Department of Labor on behalf of GF and the apprenticeship program. Workforce Development Director Christine McLear manages the program's records and reporting and coordinating required coursework.

The apprenticeship program has provided GF with assistance monetarily through the SUNY Apprenticeship Program (SAP), New York Colleges Apprenticeship Network (NYCAN), and the Apprenticeship Expansion Grant (AEG 2) to help support the related instruction needs of apprentices at their companies.

The Results

In July 2022, GF had two apprentices successfully complete their apprenticeship on-the-job training and related instruction to earn their journey worker cards. Apprentices Shameer Ally and Tyler Mahoney are the first two successful apprentices at a semiconductor manufacturer and at GF.

GF currently has over 50 apprentices enrolled in the program. The manufacturer has also registered another apprenticeship program with the Vermont Department of Labor for its Essex Junction, Vermont chip fab, making it the first national, multi-site Registered Apprenticeship Program (RAP) in the semiconductor industry.

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The apprenticeship program has attracted a diverse applicant pool in the region, ranging from recent high school graduates to those looking to change careers, as well as reaching candidates from underrepresented populations.

Tara McCaughey
GF's U.S. Workforce Development Lead

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About CEG, Business Growth Solutions
CEG's Business Growth Solutions (BGS) serves small to medium sized manufacturing and technology companies (SMEs) helping them drive top and bottom-line growth. CEG BGS is a Regional Technology Development Center (RTDC) and houses the regional Manufacturing Extension Partnership (MEP) center, which is part of the New York State MEP program, which is funded by National Institute of Standards and Technology (NIST) and Empire State Development Division of Science, Technology, and Innovation (NYSTAR).

For more information about CEG's apprenticeship programs, contact CEG Workforce Development Director Christine McLear at christinem@ceg.org.