



REVISED VISION: The Northwest Georgia Regional Advanced Manufacturing Strategy aims to create...

*“A WORLD-CLASS MANUFACTURING WORKFORCE CULTIVATING A CULTURE OF TALENT AND INNOVATION
IN A VIBRANT AND DIVERSE REGION.”*

DRAFT MISSION: “Create economic prosperity in Northwest Georgia to ensure the region’s future as a global leader in the floorcovering industry and to foster the environment for advanced manufacturing to grow and thrive.”

“We will implement this shared vision and unified message by:

- Targeting **WORKFORCE TRAINING** and **EDUCATION** programs to fit industry needs to create a pipeline of skilled labor in the region;
- Developing regionally-critical **INFRASTRUCTURE** to meet the needs and growth of industry and improved quality life;
- Conducting industry-leading **RESEARCH, INNOVATION & SUSTAINABILITY** to support new technologies, materials, and programs; and
- Collaborating to create meaningful **PARTNERSHIPS** to guide economic growth.”

The NWGA Regional Advanced Manufacturing Strategy will remain in effect for five years (2014 – 2019), at which time the NWGRC will convene the Implementation Committee to revise the strategy based on the changing needs of the community and industry.

Enterprise Innovation Institute
innovate.gatech.edu

A Unit of the University System of Georgia An Equal Employment Opportunity Institute

Draft Goal 1. WORKFORCE TRAINING and EDUCATION

Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
Objective 1.1: Develop and nurture a skilled advanced manufacturing workforce in northwest Georgia.					
Create a task group made up of representatives from industry and education to assess the needs of the industry, and develop requirements and a curriculum that is respondent to those needs while meeting educational requirements.	Industry partners, College and Career Academies with GA Dept of Ed, and the Technical College System of Georgia, GNTC, GT	The State			
Develop an industry-recognized certification at college and career academies in mechatronics, industrial systems, electronics, or electrical engineering to allow students to transition to immediate employment, or obtain partial tech college credit. Expand certification program offerings to high schools in long term.	College and Career Academies with GA Dept of Ed, and the Technical College System of Georgia	Industry Partners	College + Career Academies Implementation - Short-Term? H.S. Implementation – long-term.		
Create a high school summer internship program between industry and local high schools. (Consider a small financial incentive and credit towards graduation.)	Industry partners	Local high schools			WIA funds
Establish a co-op employment program (after school hours) for high school students during the year.	Industry partners with local high schools				
Develop a two-year apprenticeship program (during school hours) with college and career academies and participating employers. Credit earned toward graduation and skills certificate.	College and Career Academies with GA Dept of Ed, and the Technical College System of Georgia,				

Comment [A1]: Maybe this is actually a separate goal, since it is more long-term.

Comment [A2]: May be a good way to get around the scheduling conflicts between schools/industry. May require industry changes to age limits on shop floor.

Comment [A3]: Scheduling conflicts might make this difficult to implement. Will require flexibility on part of both industries and schools. Post-secondary schools may be a better target for these efforts.

Comment [A4]: See above comment.



Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
	Industry partners				
Establish a summer “externship” program for middle and high school teachers. <i>*Best Practice: CBIA Education Foundation</i>	Industry partners	Local middle and high schools (Bartow’s Teacher’s Resource Center?)			
Expand GNTC offerings to include two new industry-based programs (mechatronics + automation, programming most needed).	GNTC	Industry partners			
Sponsor recruiting events at both HS and college level (bounty for “smart” recruitment). <i>*Best Practice: NYC’s Tech Talent Draft, Chattanooga’s GeekMove relocation incentive program</i>	Industry partners with local high schools				
Provide digital learning experiences at local colleges where applicable. <i>*Best Practice: “Tooling U” and American Welding Online</i>					
Develop a workforce assessment tool for college and career academies, colleges, industry to use to track where students are going, so the region’s workforce needs can be targeted and addressed quickly.	GT E12				
Expand and promote Fast Track program.					



Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
Expand student access to college and career academies, targeting rural communities.	TCSG				
Objective 1.2: Train the region's existing workforce, and attract skilled labor from outside the northwest Georgia region.					
Partner with Georgia Tech's VET2 veteran hiring program to funnel transitioning military personnel into the civilian workforce in NWGA.	Georgia Tech (Savannah campus)				
Implement a comprehensive training course that uses floorcovering processes to teach mfg fundamentals (i.e. LEAN, SPC, Six Sigma, Innovation-Process Improvement, Quality, Cost/Waste Mgmt).					
Support Georgia's High Demand Career Initiative by coordinating IMCP workforce program efforts with the Georgia Department of Economic Development's (GDEd) Workforce Division.	GDEd Workforce, private foundation partners				GDEd Workforce, private foundation sources
Provide incentives for recent graduates to relocate from outside the region (e.g., tuition loan repayment program, mortgage assistance). <i>*Best Practice: Martin Health System, Kansas Rural Opportunity Zones, Chattanooga's GeekMove relocation incentive program</i>					

Comment [A5]: Look into other vet programs – get plugged into common military job search platforms like Hire-A-Hero, explore new military intern programs allowing transitioning vets to work off base during transition (with military picking up their cost).

Comment [A6]: Floyd County may be offering these courses – opportunity to expand existing program?



Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
Objective 1.3: Expand STEM-based education in the region's primary and secondary schools.					
Develop a STEM+E (STEM + engineering) focused elementary school as a regional draw.	Local school system	Industry partners, Tellus museum			
<i>*Best Practice: AJ Whittenburg Elementary (Greenville, SC)</i>					
Invest in a mobile STEM/engineering classroom that could provide hands-on learning opportunities for elementary and middle school students.					
<i>*Best Practice: The Institute for Advanced Learning and Research, Danville VA</i>					
Expand existing DEM camp offerings.				SME Education Foundation, National Association of Manufacturers, private foundation partners	
<i>*Best Practice: Gateway Academy</i>					
Implement an "AMP It Up" program (Advanced Manufacturing and Prototyping Integrated to Unlock Potential) in local middle schools to enable students to explore their creativity and apply STEM knowledge using rapid prototyping equipment.	Georgia Tech CEISMC, local school systems				NSF grant
<i>*Best Practice: Griffin-Spalding County School System</i> https://www.ceismc.gatech.edu/ampitup					

Comment [A7]: Possibility to bring industry experts into the classroom to lead projects?



Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
Implement an industry mentoring program to give elementary students soft skills and a subtle STEM foundation (1 hour/week industry commitment). <i>*Best Practice: Partners in Education program, East View Elementary School (Olean, NY)</i>	Industry partners				
Object 1.4: Retain existing industry through the quick and efficient response to changing industry needs.					
Implement a "Total Workforce Delivery System" for industry (could serve as the online portal for all workforce resources in the region). <i>*Best Practice: AIDT in Alabama (http://www.aidt.edu/services/), and Ready SC in South Carolina</i>	Georgia Workforce Development				

Draft Goal 2. INFRASTRUCTURE

Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
Objective 2.1: Support the sustainability and efficient use of utilities and water resources.					
Provide incentives for low-use/low-cost utilities to industry (e.g., profit-sharing contract, sliding scale, cost recovery).	Dalton Utilities, ECG, TSEMC, Georgia Power				USDA
Objective 2.2: Invest in broadband infrastructure needed for sustainable advanced manufacturing growth.					
Support the strategies outlined in the	Georgia Technology				USDA

Comment [A8]: Consider USDA as a potential funding source for any utility related developments



Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
“Digital Economy” plan for the region, including high-performance, “plug-and-play” network infrastructure and wifi access at industrial sites.	Authority				
Objective 2.3: Develop and maintain transportation infrastructure to allow for efficient movement of materials + products throughout the region.					
Work with the Georgia Ports Authority to develop an inland port for the region.	Georgia Ports Authority	Railroad (CSX/NS), ARC, State of Georgia, GDOT, local jurisdiction (site of development)	1-2 years	\$30M	Georgia Ports Authority, Railroad (CSX/NS), ARC, State of Georgia, GDOT, local jurisdictions
Consider strategic regional development of the port, in the context of a larger innovation network and development. <i>*Best Practices: Memphis, Front Royal VA, Kansas City Smart Port</i>					ARC, State of Georgia, DOT, local jurisdictions
Develop an east-west connector between I-75 in northwest Georgia and I-85.	GDOT				GDOT, federal sources, ARC (funds for Appalachian Highway System Development)

Draft Goal 3. RESEARCH, INNOVATION & SUSTAINABILITY

Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
------------	---------------------	---------------------	-----------	------	-----------------



Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
Objective 3.1: Target the “greening” of the floorcovering industry – technological advancements, drive toward sustainability, environmental stewardship, economic sustainability, and worldwide leadership in the floorcovering industry.					
Create cross-functional, cross-company R+D teams to identify new sustainability practices leading to zero waste.	CARE				
Conduct an environmental management study across the supply chain	Georgia Tech				
Develop technologies to identify recyclable materials as part of reverse supply chain process	Georgia Tech iMAT				
Share basic sustainability BPs with smaller businesses in the industry to help establish a baseline of sustainability throughout the industry.	CARE	Industry Partners			
Objective 3.2: Leverage technical expertise in sustainability, materials, and energy research at state research institutions.					
Create an endowed chair at Dalton State for Sustainable Engineering	Dalton State				
Increase GaMEP’s presence in site visits to floorcovering OEMs and suppliers.	GaMEP				
Identify new three new IMat materials research opportunities.	GT iMAT, industry				
Conduct E3 and lean assessments with floor covering SMEs/suppliers.	GaMEP				
Objective 3.3: Support the professional development and global reach of the floorcovering industry with internationally-recognized industry events.					

Comment [A9]: Consult Bob Peoples (CARE) and Paul Murray (Shaw)

Comment [A10]: Exercise care not to violate anti-trust laws



Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
Offer X new energy management training courses in the region.	Georgia Tech				
Host a global advanced manufacturing symposium.	Industry Partners, CRI	Georgia Tech			Possible funding through Centers for International Business Education grants
Host a national-level materials research conference.	Industry Partners, CRI	iMAT, GNTC, Georgia Tech			Possible funding through Centers for International Business Education grants
Host quarterly sustainability-focused industry networking or “lunch-and-learn” style events.	GaMEP	CARE, CRI	3-5 years		

Draft Goal 4. PARTNERSHIPS

Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
Objective 4.1: Improve the image of 21st century manufacturing as a viable, smart career choice.					
Convene a focus group made up of educators and school counselors to explore how to sell advanced mfg as a viable career path to other educators, parents, and students.	CRI, Industry partners	Local school system			
Partner with a host site like “Career Me Manufacturing” to promote industrial program offerings in the region.					
Market manufacturing to teachers					

Comment [A11]: Marketing and the development of partnerships maybe most important initially, to set the stage for the implementation of the other goals + objectives. Also, a supporting partner for marketing/education activities may be local tech companies

Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
and high school counselors. (Mandate a “teachers in industry” program, Industry “open doors” for even short, 2-3 hour tours for teachers on staff development days, or pay for summer hours.)					
Partner with North Georgia Technical College on their “Dream It, Do It” manufacturing education program.		GNTC, Dalton State			
Host a “Manufacturing Day” event for parents, grandparents, middle and high school students, and teachers to interact with industry.					
Promote the “Go Build Georgia” campaign in schools, along with peer-to-peer learning to communicate career opportunities and advancement potential in advanced manufacturing.					
Market the sustainability of the floorcovering industry.	CARE	Industrial partners			
Market the success of internship and apprenticeship programs to industry.					



Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
Develop marketing materials that explicitly show financial costs/benefits of the mfg education/career path versus other disciplines. Enforce the potential tuition savings and earning potential.	Chambers of Commerce	Industry partners, Local school systems			
Objective 4.2: Develop alliances to strengthen future regional investment.					
Support goals of the TN Valley IMCP, Thrive 2055 study.					
Conduct international site visits with GDEcD to identify potential export and foreign direct investment opportunities.	GDEcD	Industry partners, Chambers			
Objective 4.3: Create the organizational structure to develop a “manufacturing hub” in NWGA (S-FLOR).					
Create an advanced mfg center for the floorcovering industry that provides training and equipment (S-FLOR). Other services include: commercialization assistance, incubator space, advanced materials research lab, energy studio, and R&D space.	GNTC, Dalton State, Georgia Tech’s Manufacturing Institute for staffing and grad students, GT iMAT for sponsored research)	Georgia Center of Innovation for Manufacturing, industry			
Objective 4.4: Support the location of small and medium sized enterprises (SMEs) and entrepreneurs in the region.					
Create a regional “supplier match program” that will encourage the use and location of suppliers in the region.	GaMEP	Industry Partners, Chambers			NIST
Support the development of a	City of Dalton, UGA	Georgia Tech,			SBA

Comment [A12]: Need further research into the full benefits/costs of attracting FDI to the region.

Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
business incubator at S-FLOR geared toward advanced manufacturing companies. Conduct Phase 2 of the incubator feasibility study.	Archway	Dalton Chamber			
Objective 4.5: Enable industry to seamlessly engage with the education system at every level					
Develop a manufacturing equipment donation tax credit for new/used equipment donation.	State of Georgia	Georgia Association of Manufacturers, Industry Partners			
Include student teams to accompany industry partners at product/industry conventions or expo events.					
Objective 4.6: Provide outlets for HS students to get hands-on experience with advanced manufacturing equipment					
Create a standalone samples lab at S-FLOR where industry commits to producing a percentage of its samples out of that training facility. <i>*Best Practice: Southwire</i>	Industry partners, Georgia Tech	Local school system			
Build an "invention studio" located at the advanced manufacturing hub (see below) using donated equipment from industry.					
Develop a mobile "maker space" that could travel to schools to provide hands-on learning opportunities					
Create a community "maker space" where students/parents, the community at large, and industry professionals can interact through					

Strategies	Responsible Parties	Supporting Partners	Timeframe	Cost	Funding Sources
<p>hands-on experiences and competitions.</p> <p><i>*Best Practice: GE FirstBuild (1B)</i> https://firstbuild.com/</p>					
<p>Create high school student competitions to solve an industry problem or design flooring from concept to product. Other ideas include robotics, Inventure Prize, Hackathons, manufacturing kaizen events (like Honda), Idea Conventions, etc.</p> <p><i>*Best Practice: Deep Orange, CU-ICAR</i></p>	<p>Industry Partners</p>	<p>Local school systems, Chambers</p>			