Alabama:

Challenges and Strategic Plan for Aerospace Sector
Strong Start, Strong Finish: An Education-to-Workforce Vision for Alabama
Strong Start, Strong Finish: An Education-to-Workforce Vision for Alabama

• A strategic vision for aligning Alabama’s education and workforce programs from pre-k to the workforce to provide for a seamless education-to-workforce continuum for all Alabamians.

• A postsecondary education attainment goal of adding 500,000 credential holders to Alabama’s workforce by 2025 and a goal to increase Alabama’s labor force participation rate of 57.6 percent to the national average by 2025.
The Alabama Office of Apprenticeship
The U.S. Department of Labor allows registered apprenticeships programs to be approved by either the federal Office of Apprenticeship or a federally-recognized state apprenticeship agency.

The AOA will create a federally-recognized state apprenticeship credential, equivalent to the Department of Labor’s Registered Apprenticeship credential.
The Alabama Commission on Credentialing and Career Pathways

• The ACCCP, and its series of technical advisory committees composed of business and industry members representing each sector, will be responsible for determining the valuable career pathways in each region and for evaluating credentials and determining if they should be placed on the Alabama Compendium of Valuable Credentials—Alabama’s list of credentials of value.
The Two-Pronged Alabama Career Pathways Model

The Youth Prong (based on secondary CTE and dual enrollment in postsecondary CTE)

In-school youth are provided shortened programs so they earn an associate degree, complete an apprenticeship, and earn stackable, industry-recognized credentials at the time of high school graduation.

Stackable Credentials mapped to AA/BA degrees

Both prongs of the Career Pathways Model allow participants to earn stackable credentials across a competency model for in-demand career pathways

The Adult Prong (based on co-enrollment in postsecondary CTE and adult basic education)

Adult learners are provided lengthened career pathways with multiple on and off ramps so they can upskill, earn a credential, and reenter the workforce to receive a higher wage.
The Future

- Upgrade of current technology to match industry
- Industry 4.0 technologies and systems
- Advanced Materials and Joining Technologies
- Tooling Maintenance and Support
- Additive Manufacturing (3D printing)
- Promotion and Marketing
- Technical Committee
- Partnerships
WHAT? Create a “smart” factory.

HOW? Install a generic system approach of Industry 4.0 to provide certification to trainees.

WHY? It is where the world is going and our manufacturing customers/partners requested it. This technology will move RTP forward with industry on a preventive maintenance training arena.

DEFINE: The foundation of the Industry 4.0 facility is an information system connected to fundamental production cells. The vision is to build a mini “smart” factory with all elements included. RTP can modify the system in the future to expand capabilities and add other robot vendor/automation technology.
Materials and joining of these materials make traditional manufacturing techniques and technologies almost obsolete as companies, around the globe and within Alabama, scratch their heads trying to figure out the best path for their unique set of problems surrounding this work.

**RTP SOLUTION:** RTP can be on the leading edge assisting Alabama companies resolve these issues by linking with many others networks across the world working on new and innovative technologies.

**HOW?** With a few adjustments, some additional equipment and staff, RTP can enter this discussion with a goal of being a resource for our companies.

**Examples:** Add resistance-welding equipment, laser welding equipment and press work. In addition, working with joining techniques related to the new materials.
Other technologies with Advanced Materials and Joining Technologies that will assist Alabama companies in moving to the new world of manufacturing. These added technologies are making a large presence in our Alabama manufacturers.

Year One: Introduce Automated Ground Vehicle (AGV) training to the RTP (we have 2 AGVs currently, but will need to add one additional.)

Year Two: Combine technologies with materials (stamping press/machining/stamping dies/molds to plastics, resins, etc.)
Manufacturing is seeking alternatives to be able to design faster at a less cost method for testing and mass production.

**THE NEED:**

Many companies with very specific and specialized parts needs have successfully introduced 3D printing into their manufacturing processes from ABS plastics to metal.

**Current Status:**

**RTP SOLUTION:**

*First Phase* - With our existing equipment, phase one can be achieved by adding an instructor and offering training with the plastic and multi-material printers we currently own and watch the technology path unfold.

*Second Phase* - The second phase of RTP additive work can be achieved by adding a metal printer at a future date. This is where the costs become important and where we need to monitor the world to see how the technology matures.