INITIAL FINDINGS REPORT:

STUDENT SKILLS FOR THE FUTURE

SPRING 2022

JACKSONVILLE PUBLIC EDUCATION FUND

Powering Potential

A LANDSCAPE ANALYSIS FROM THE JACKSONVILLE PUBLIC EDUCATION FUND

INTRODUCTION

What is the purpose of education? How does that change as the world changes?

The world has shifted greatly in the 200 years since the public school as we know it, a universal model, was introduced and what students need to be prepared for the workforce has changed with it. Global economies are currently at odds with training their workforce during what experts have coined the Fourth Industrial Revolution (4IR), which describes the disruption and change in technology, industries, and societal patterns and processes (such as production) due to the convergence of digital, biological, and physical worlds. Nationally and locally, occupations in IT, engineering, and healthcare are expected to grow at three times the rate of other professions. Additionally, the number of skilled technical positions, those requiring science and engineering expertise, such as those in construction and extraction, are nearly double those of positions requiring a Science, Technology, Engineering, or Mathematics (STEM) degree. Given these labor trends, STEM education and Career Technical Education (CTE) training are an essential part of preparing our current students for being productive citizens in a globalized economy that is marked by rapid, technological, change.

A regional analysis conducted by the University of North Florida (UNF) in 2017 identified significant strengths in Northeast Florida for expediting the growth and expansion of high quality STEM training. Given the rate of technological advancement, the role of STEM training in creating globally competitive workers, and the unprecedented shift to hybrid and remote learning across the COVID-19 pandemic, it is important to visit the Duval County landscape and see what exists in the landscape for STEM and CTE preparation for all students, but particularly students from historically marginalized backgrounds.

One of JPEF's strategic priorities is students' skills for the future. To ensure all Duval County students are prepared to be productive citizens in a globalized economy, JPEF has critically examined the offerings, access, and any available outcomes of 40+ STEM and CTE programs available in Duval County. Additionally, JPEF conducted interviews and focus groups with educators and a variety of employers (N=30) to compare their perspectives on what skills students need to be successful in the workforce and what challenges they face reaching those needs.

Overall, much partnership between the Duval County School district and major university, business, and community partners has deepened significantly over the past five years, as is evidenced by increase in STEM, computer science, and CTE courses offered and enrollment. In school partners and employers agree on challenges still facing student preparation for careers in Duval County, related to communication and critical thinking skills. The district and partners

are poised to continue their rapid pace of expansion and scale best practices to create a systems wide approach, with more investment, support, and convening.

LANDSCAPE SNAPSHOT

This Landscape Analysis provides a high-level summary of Duval County's existing capacity and efforts in providing high quality STEM and CTE education and training to all students, analysis of any existing outcome indicators, analysis of current labor market trends and recommendations for supporting or improving efforts.

Importantly, this Landscape Analysis is not intended to capture every individual initiative in Duval County that is involved in the space of STEM and CTE; instead, it is meant to synthesize the most relevant opportunities going forward based on the current capacity of major players in this space.

Inputs for analyzing Duval County's capacity:

- Quantitative indicators related to the scale and reach of the programs
- Labor market data
- Demographic and student test score data
- Review of previous landscape and market analyses or reports in this region
    - E.g., University of North Florida, State of STEM2 in Northeast Florida (2017)
    - E.g., Elevate Northeast Florida, Workforce Development Assessment (2018)
    - E.g., Consortium of Florida Foundations, Sparking and Sustaining Student Interest in STEM: Impactful Strategies for Local Education Foundations (2020)
    - CareerSource Northeast Florida, Comprehensive 4-year plan (2020)
- Qualitative analyses of original interviews and focus groups JPEF conducted with 30 stakeholders on field capacity, challenges, and opportunities from key stakeholders, including business leaders from top employers in Duval County, non-profit, and school district partners.

What will students need in the future from Duval County?

The US Bureau of Labor and Statistics projects computer science STEM occupations growing 12% by 2029, creating over half a million jobs. According to labor market projections in this region, IT analysts, personal care aids, and software developers are expected to be three of the fastest growing occupations for the next 8 years as can be seen in the figure below.

Fastest Growing Occupations in Northeast Florida		
Occupation	# of openings- 8 years	Annual % Growth
Personal care aids	7,108	3.8
Computer and information analysts	2,529	1.9
Software developers and programmers	5,215	2.2
Counselors	3,748	2.3
Therapists	2,105	2.5

Management analysts	4,096	2.0
Misc healthcare support	10,321	2.2
Nursing, psychiatric, and home health aids	12,333	2.2
Cooks	15,924	2.1
Fast food and counter workers	40,873	1.9
Table drawn from CareerSource Northeast Florida 2020 Comprehensive four-year plan		

The remaining fastest growing occupations likely include positions that require digital and tech literacy as well as science and engineering expertise. The largest growing occupation, personal care aids, are entry level to many other healthcare positions, such as technicians, which require science and engineering knowledge. Indeed, the National Science Foundation's tracking of the United States science and engineering workforce includes skilled technical workers- those in occupations that require science and engineering expertise but not a 4-year STEM degree- such as in construction and extraction, advanced production, maintenance and repair, and some healthcare positions. Skilled technical workers more than double the number of science and engineering workers who hold STEM degrees but still require knowledge, training, and technical certifications in science and engineering fields.

From this, it is clear that occupations requiring expertise in science and engineering offer a wealth of opportunity for our community. The disparity in attracting, training, and retaining US students across the pipeline to STEM fields is an essential issue given the relevance of these skills to making the United States a competitive leader in the global economy, to improving cyber security in an increasingly digital world, and innovating with cutting-edge technology (e.g., AI, autonomous vehicles, and hypersonics) during the 4IR. Expanding to include those interested in broader skilled technical positions in STEM opportunities can bolster the expansion of science and engineering skills broadly in Duval County.

An Equity Perspective

The region has experienced strong growth in construction, lodging, professional and business services, hospitality, and government sectors overall, but what does that look like for historically marginalized populations?

Nationally, Black, Indigenous, Latine, and other historically marginalized populations remain underrepresented in STEM occupations compared to their representation in the workforce. As can be seen below, the percentage of workers identified as White and Asian in STEM professions exceeds the percentage of representation in the overall workforce.

Racial and Ethnic Breakdown of STEM workforce		
Race/Ethnicity	% of Total workforce	% of STEM Workforce
American Indian or Alaska Native	0.5	0.2
Asian	6.2	9.3

Black or African American	11.5	8.5
Hispanic or Latine	17.8	14.2
Other or more than one race	2.2	2.1
White	61.4	65.3
Table drawn from NSF NCES 2020 STEM labor force of today		

Gaps in demographic representation in the STEM labor force mirror the national landscape. Additionally, residents with disabilities make up about 15% of the Northeast Florida population, yet only 25.3% of those residents are counted in the labor force, as compared to 66.7% of the labor force participation for workers without disabilities.

Despite booming economic growth, the region continues to face difficulties reaching all portions of the labor force, especially historically marginalized groups who face significant barriers to accessing and maintaining employment; such as workers without access to consistent transportation, workers with disabilities, and justice-involved workers. Significant and intentional efforts to make research-based training and opportunities accessible for these groups are necessary to include them in the workforce.

Success in the Workforce

According to the National Science Foundation, there are some key ingredients to preparing students for success in STEM careers. Below are the ingredients:

1. The acquisition of knowledge, skills, and habits of mind
2. Opportunities to put these into practice
3. A developing sense of competence and progress
4. Motivation to be in, a sense of belonging to, or self-identification with the field
5. Information about stages requirements, and opportunities for occupations

What are the Skills Students will Need to Succeed in STEM Careers?

According to the literature, STEM is not a just group of subjects that can be learned in school, it is also a way of looking at the world- "using knowledge and data to design solutions to complex problems, collaborating and communicating with people worldwide, and persisting and continuing to work, even when things get hard." Below is a list of common skills that are often included in workforce development literature when discussing student success.

- Learning skills- Also known as the "four Cs" of 21st century learning, these include critical thinking, communication, collaboration, and creativity.
- Life skills - Flexibility, initiative, social skills, productivity, leadership
- Literacy skills- Information literacy, media literacy, technology literacy

To understand which of these skills is most important and recognized in the Duval County context, the JPEF research team conducted focus groups and individual interviews of DCPS administrators and staff, community business leaders, CTE partners, and labor leaders. Focus group and interview participants were presented with a random arrangement of the 12 skills identified in the literature and asked which the participants think are most needed for success

in their organization and what challenges they face with reaching those needs. Of the groups, 100% identified communication and critical thinking as essential for success in their organization, though each group highlighted different aspects of communication. In addition, half of the groups identified technological and digital literacy as a third skill and the other half identified social responsibility as essential. In terms of challenges, 100% of the groups named lack of developed communication and critical thinking skills in new employees. All of the employer groups (75% of total focus groups) described challenges related to students not being prepared with the breadth and depth of information on occupations, benefits, and career stage progression upon graduation. Additionally, half of the groups named generational differences and a labor shortage as top challenges. The particular breakdown of skills definitions and challenges can be seen below.

DCPS STEM Administrators and Staff

Skills

- Communication
  - The ability to express oneself
  - Group dynamics are inherent in all STEM occupations, so this skill is essential to navigating those dynamics
  - Foundational to all other skills required for success
- Critical thinking
  - Problem solving
  - Lack of critical thinking leads to issues of persistence
  - The ability to take data and make sense of it
- Social responsibility
  - Necessity of collaborating with others

Challenges

- Time and funding for research-based STEM training for teachers
  - General area teachers can be uncomfortable with STEM materials when trying to embed it throughout the curriculum. Lack of enough evidenced-based training to support current teachers.
- Intentional integration of soft skills into curriculum
  - While there is interest in intentionally integrating soft skills into the curriculum there are still the questions of how to embed and evaluate them in the district without adding yet another assessment
- STEM opportunities earlier than 6th grade
  - Currently, STEM interest is difficult to spark in high need schools at later grades. Need earlier opportunities to spark interest.
- Ensuring equitable uptake of STEM programming opportunities
  - While there have been many successful efforts to improve STEM access in the region, ensuring the uptake of these efforts by historically marginalized students continues to be a challenge. More investment is necessary to understand and ameliorate the barriers to engagement in promising STEM programming.

Business Leaders

Skills

- Communication

    - Face to face communication as well as on digital platforms is essential for success in current organizations
    - Two essential aspects of communication they highlighted were workers ability to break down information for a broader audience and listening
- Critical thinking
    - Problem solving
    - Lack of critical thinking leads to issues of persistence
    - The ability to independently figure out the next step, even if all the instructions are not there
- Technical and digital literacy
    - Necessary for navigating work on multiple platforms for everyday tasks
    - Skill is increasingly important especially since COVID accelerated hybrid and remote work.

Challenges

- Not enough appropriate information about stages of career progression
    - Find new workers have unrealistic expectations about promotion structure
- Intentional integration of soft skills into school curriculum
    - Find new workers face more challenges with soft skills than technology
- Bridging generational differences
    - The ubiquity of technology for generations z makes traditional business methods of communication a challenge
- Ensuring equitable uptake of programming and opportunities
    - While business leaders want to support historically marginalized workers, they have difficulty attracting them to internship and exposure events.

Labor Leaders

Skills

- Communication
    - Skill necessary to accomplish the majority of work tasks (group dynamics)
    - Improves efficiency
- Critical thinking
    - Problem solving
    - The ability to create solutions to daily situational issues
- Social responsibility
    - The skill of collectively towards goals
    - The understanding of the power of collectively working towards goals

Challenges

- Not enough appropriate information about of roles, opportunities, and benefits
    - Students are not exposed to the wide range of roles or benefits available related to career and technical education pathways
- Labor shortage
    - There is a severe construction labor shortage related to the lack of information sharing about the career
- Intentional integration of soft skills into school curriculum
    - Find new workers face most challenges with soft skills
- Emphasis of college pathway over any other in school curriculum

- Leads to labor shortages and stigma of CTE pathways

CTE Partners

Skills

- Communication
  - Face to face communication as well as on digital platforms is essential for success in current organizations
  - Excellent communication skills are necessary for upward mobility in organizations
- Critical thinking
  - Creative problem solving
  - The ability to see bigger picture
  - The ability to independently figure out the next step, even if all the instructions are not there
- Technical and digital literacy
  - Even more necessary since COVID
  - Software design literacy (unrelated to communication)

Challenges

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- Intentional integration of soft skills into school curriculum
  - Find new workers face most challenges with soft skills
- Bridging generational differences
  - The ubiquity of technology for generations z makes traditional business methods of communication a challenge

These findings suggest that school administrators are on the same page with a variety of business leaders and workforce partners as to which skills are most necessary and most challenging in Duval County. The high rate of agreement suggests that these partners are ready to collaborate more deeply on ensuring DCPS students are prepared with communication and critical thinking skills. However, the challenges suggest the community could benefit from more funding and convening efforts to understand exactly how to integrate and evaluate these skills in a way that business can also contribute to and value.

Focus Groups Findings Summary

	Skills	Challenges
DCPS STEM District and Teachers	Communication Critical Thinking Social Responsibility	STEM training for teachers Embedded soft skills into curriculum STEM opportunities earlier than 6th grade Equitable uptake of STEM programming opportunities
Business Leaders	Communication Critical Thinking Technical and Digital Literacy	Unrealistic expectations of career progression Embedded soft skills into curriculum Bridging generational differences Equitable uptake of STEM programming opportunities
Labor Leaders	Communication Critical Thinking Social Responsibility	Insufficient information on benefits to CTE pathways Labor shortage Embedded soft skills into curriculum Emphasis on traditional college pathway (CTE stigma)
CTE/STEM Employers	Communication Critical Thinking Technical and Digital Literacy	Insufficient information of benefits to CTE pathways Labor shortage Embedded soft skills into curriculum Bridging generational differences

Opportunities to Practice Skills

The research team collected and reviewed information from over 40 STEM and CTE providing institutions in Duval County. Institutions were coded for what specific skills they publicly advertise offering, setting, target population, duration of program, and number served. Included in these 40 are partners that have ecosystems of programs like DCPS and STEM2Hub as well as singular programs like Jacksonville Zoo and Gardens STEAM interactive workshops. Most of the out-of-school time companies reviewed did not include detailed information publicly on skills offered and population-served.

DCPS has the greatest equity opportunity because of their student reach during the school day. Due to partnerships with university stakeholders like UNF's STEM2Hub, community stakeholders like Lift Jax and Jacksonville Transit Authority, and business community stakeholders like the Microsoft TEALs and Code.org, DCPS offers 53 STEM Choice programs, 50 Career academies, and a variety of courses and opportunities (see figure below). Of these 103 specialized programs or academies, 55% of them are focused on high school aged students, 25% on elementary, and 15% on middle school students.

There are roughly 125,000 to 130,000 students in Duval County, 44% are identified as Black, 31% as White, 15% as Latine, 5% as Multi-Racial, and 4 % Asian across 194 schools. In addition, 67% of the students are labeled "economically disadvantaged, and 17% of students are identified as students with disabilities. What opportunities do these students have to put skills related to STEM and CTE into practice?

Below is a list of experiences and topic areas offered at each grade band.

Grade Band	Experiences offered
K-5	Engineering lab classes, elementary robotics team, investigating with nature and plants, hands on science experiments, applied mathematics, technology based learning with classroom resources, math lab classes, STEM lab, tiered coastal sciences activities and core content per grade level, focus on coding, designing games and apps, computational thinking, digital citizenship, science enrichment, water safety, recycling, gardening
5	STEM lab, STEAM leadership program, robotic, aviation and military science, computer science
6-8	21st century skills, media and technology skills, communication skills, collaboration skills, agri-science, agriculture, STEM offerings, computer science
9-12	video game design, cyber security, embry riddle aerospace, exercise science, CTE, information technology, carpentry, cosmetology, criminal justice, Fire science, web and development, welding, digital video, technology, engineering, gaming, commercial art, technology, digital design, cinematic arts, digital photography, cinematic arts, digital video technology, business management and analysis, digital design, culinary arts, agriscience, biotechnology & vet assisting, automotive,

	aviation, communication, digital video technology, computer science, coding fundamentals, CPT & net security, cybersecurity

To further understand the reach of these programs, key informant interviews and publicly available information have suggested:

Systems growth, by the numbers- STEM2Hub Ecosystem and Partners

2015- inputs	2016-2021 - activities	2021-2022- outcomes
STEM2Hub was formed by the business community to "convene, inspire, and invest in the STEM2 field by providing the essential missing elements to accelerate growth of STEM2 education and careers."	Continuous in-school opportunities • Expanded computer science access from one to all high schools • Expanded computer science in secondary schools to offer 14 state approved courses • Created partnership with Microsoft Philanthrophy's TEALS program integrated instructional support for highest need schools • Expanded computer science course offerings in elementary schools. Continuous afterschool activities • Institutionalized robotic programs in the school district in all afterschool programs, over 100 sites. Continuous virtual learning opportunities • Created Learning Blade partnership • Created SpaceGate station, virtual resources for STEM curriculum in the context of space One day all school events • Hour of Code • Space Day Duval Professional development • 1,199 teachers (code.org) • Computer science fundamentals,	Continuous integrated in-school opportunities • Created integrated robotics coding and STEM curriculum into core course curriculum maps, standards, and implementation, for all elementary schools. • 47,951 Elementary school students enrolled in computer science courses • 5,693 high school students enrolled in advanced placement and other foundational computer science courses, such as coding fundamentals and foundations of web design • Microsoft Philanthrophy's TEALS program 7 schools Continuous integrated afterschool activities • 750 students on robotics teams during and after school Continuous virtual learning opportunities • Around 50,000 students exposed to STEM Spacegate station lessons • 2,300 students this year One day all school events • 20,000 students exposed to last Hour of Code event • 36,000 students attended Space Day Duval Professional development • 1,038 Elementary school teachers trained in

	discoveries, and principles Hardware and Software • Developed partnerships with business community to donate computers to economically disadvantaged students	computer science fundamentals • 99 Secondary teachers trained in computer science discoveries • 62 High school teachers trained in computer science principles Hardware and Software • 2,000 computers provided to economically disadvantaged students through key partnerships with business communities

This information suggests that more than half of Duval County students (at least 75,000) are definitely exposed or engaged in some STEM or CTE program annually and that nearly all students should have some opportunity in school to engage in a STEM exposure or applied opportunity during the year. Many of these opportunities didn't exist in this community a few years ago so their presence represents the great success of partnerships between the school district, university, community, and business partners. However, more information, especially from out-of-school time partners, on who is being reached by programs is necessary to understand the reach of the programs. More support, alignment, and investment is needed to further integrate these opportunities to ensure that all students are being reached and to scale best practices.

Indicators of a Developing Sense of Competence

There is much energy and programming efforts around CTE and STEM preparation in Duval County. According to key informant interviews and publicly available information, more than 70,000 students are annually involved in some kind of pilot STEM exposure programs. What evidence do we and the students have of their progress?

Math education is a common indicator for understanding if students are improving STEM preparation. Drawing data from multiple years of the National Assessment of Education Progress (NAEP), which all U.S. States and jurisdictions have contributed to since 2003, in 2019 60 percent of Duval County students scored basic, proficient, or advanced in math assessments. This amount does not statistically significantly differ from the amount of students reaching basic, proficient, or advanced in the math assessment since 2015. Only the percentage of students scoring advanced proficient changed significantly from 2015-2019 as can be seen in the table below.

2015-2019 8th Grade Student Math Achievement- NAEP				
Year	% Below proficient	% Basic proficient	% Proficient	% Advanced Proficient
2015	36	42	18	4*
2017	27	39	19	6
2019	38	31	19	8

**Significantly different (p < .05) from districts results in 2019*

While the improvement in students reaching advanced proficiency might be evidence of the STEM preparation improving, more indicators are needed to fully understand the impact of the wide range of programs available. Overall, Duval County 8th grade student math performance in 2019 does not significantly differ from other similar sized cities in the country (e.g., Chicago, Houston, Miami-Dade, New York City) and is five percentage points lower than the national average. All of this is good news for Duval County students, overall.

An indicator of progress for CTE preparation is the number of certifications earned through career academies. Longitudinal research from the Department of Education has found that students who receive these certifications have higher graduation rates, rates of employability, and salaries compared to non-certified peers. This might be because of the robust standards that CTE programs include. Approximately 798 Job certifications awarded through career academies in the 2019-2020 school year.

Overall, these indicators suggest that programming is outpacing traditional evidence. More consistent data provided by programs on the actual content or skills they are imparting, reach of their programs (population served), and outcomes of youth they've reached is needed to assess impact of various options and improvement. Additional shared indicators are needed across the district and community programming to improve understanding of student progress and sense of competence in STEM and CTE pathways.

An Equity Perspective

There have been great strides in improving STEM and CTE opportunities for students in Duval County. From an overall picture, math achievement in Duval County is on pace with similar cities throughout the country. When disaggregating the proficiency data by race and economic status, an additional narrative emerges. As can be seen in the table below, Black students had an average score that was 24 points below White students and Latine students had an average score that was 15 points below White students.

2019 8th Grade Student Math Achievement By Race- NAEP			
Race/Ethnicity	% Basic proficient	% Proficient	% Advanced Proficient
Black	50	13	2
Latine	60	23	5
White	75	37	10
Not enough students in these groups to report - Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Two or more races			

Additionally, students who are eligible for free or reduced priced lunch scored an average of 21 points lower than students who were not considered economically disadvantaged. These gaps are not statistically significantly different from gaps in the 2015 data. This suggests that while we are on pace with math achievement in the country overall and rife with STEM and CTE opportunities in the community, we have to ensure that those opportunities are more intentionally structured to reach the students for whom gaps have existed and continue to

persist. This is especially important in Duval County where the student population is predominantly made up of Black and Latine students as well as students who are economically disadvantaged.

OPPORTUNITIES FOR ACTION

1. Continue to invest in curriculum and training
    - Embed evidenced-based, developmentally appropriate STEM and soft skills curriculum throughout K-12 education. Since critical thinking and communication are foundational to most STEM curriculum, prioritizing the standardization of STEM curriculum may provide a natural way of incorporating these skills.
    - Provide evidence-based training for teachers. A repeated theme throughout early interviews and later district focus groups suggests there are not enough Math and Science content area teachers in Duval County and that time, funding, and evidenced-based training for general education teachers is lacking. One example is the INTEL Skills for innovation initiative.
    - Emphasize multiple pathways after K-12 education. Participate in de-stigmatization of CTE pathways as they provide certifications for positions that require science and engineering knowledge but are often not emphasized as strongly as pursuing advanced degrees.
2. Create a county wide Science and Engineering Workforce Agenda
    - These areas are increasingly overlapping, support existing efforts to combine funding, programming and data about each effort. In and out of school partners are highly aligned in perspectives and are looking for more support to accelerate their efforts. Accelerate joining efforts of CTE and STEM efforts
    - Leverage strength of CTE reach, structures, and success indicators. The CTE impact story is more structured and clear and provides an example for how to structure and report STEM success indicators.
    - Leverage strength of soft skills embedded in STEM education components and urgency for funding. The skills identified by focus group participants are embedded in STEM curriculum. Supporting further integration of evidenced-based STEM curriculum will inherently provide more opportunities for students to develop and practice these skills.
3. Deepen community-business engagement efforts and incentivize workers
    - Many of the business leader participants suggested that they want to be more involved with preparing DCPS students for the future workforce but there is not enough time for many STEM and CTE professionals to engage in this work.
    - One suggested solution is to include "community engagement" in annual performance reviews to structurally provide the support for workers to visit schools and provide exposure and information to students about their occupation and various pathways to employment.
4. Continue research and evaluation efforts on student skills for the future
    - A number of questions remain after this landscape analysis which should be answered through further research and evaluation.
        - What strategies do programs who are able to reach historically marginalized populations use and how can we scale those strategies?
        - What role do guidance counselors play in connecting students to career opportunities in the community?
        - How do elementary students understand and describe interest in STEM career fields?
        - What indicators can businesses and the district share that will close the gap between employment needs and student preparation?

- Given how ubiquitous technology has become across fields, what is the best way to track STEM participation in the labor force?
- What additional indicators are necessary and feasible to demonstrate preparation along elementary to high school, beyond math achievement?
- What are best practices for bridging generational differences in the workplace?

CONCLUSION

The workforce and what workers need to be successful has greatly shifted in the past 200 years and labor market trends suggest careers in science, technology, engineering, and mathematics are increasingly essential to participate in a global economy. Yet, there is a gap in training and employment. In Duval County, where STEM and CTE opportunities have expanded greatly over the past 5 years, stakeholders in and outside of school are in high agreement in what is lacking in student preparation and are primed for long-term systems change. Partners face barriers with funding and time for improvement and also bridging generational differences between their current leaders and new workers. More investment, collaboration, and sharing are necessary to improve the impact of the landscape of STEM and CTE opportunities available to Duval County students. The Duval County landscape is rife with STEM and CTE opportunities for students, partners are primed to create a collective science and engineering workforce learning agenda with shared goals, metrics, and outcomes to better equip all Duval County students with skills for the future.

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