

MINUTES
STATE UNIVERSITY SYSTEM OF FLORIDA
BOARD OF GOVERNORS
TASK FORCE ON ACADEMIC AND WORKFORCE ALIGNMENT
FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY
March 23, 2021

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and its committees are accessible at <http://www.flbog.edu/>.*

1. Call to Order and Opening Remarks

Chair Eric Silagy convened the meeting on March 23, 2021, at 10:50 a.m. with the following members present: Governors Cerio, Huizenga, Jones, Jordan, Kitson, and Lamb. A quorum was established.

2. Minutes of Task Force on Academic and Workforce Alignment Meeting

Chair Silagy called for a motion to approve the meeting minutes from the Task Force's January 27, 2021, meeting. Governor Kitson moved to approve the minutes, Governor Lamb seconded the motion, and the motion carried unanimously.

3. Discussion with Florida Business Leaders: Aerospace

Chair Silagy said the next item on the agenda was to hear the first in a series of discussions with Florida employers across a variety of critical industries. The Chair announced the discussion would focus on Florida's aerospace industry, which includes over 3,000 aerospace companies and over 100,000 people directly employed in Florida, with many more employed indirectly. Chair Silagy further explained that Florida is now recognized as hosting the second largest concentration of aerospace companies in the United States with a real opportunity for continued growth.

Chair Silagy welcomed and recognized Ms. Kirsten Dreggors, Vice President of Engineering and site leader for the Melbourne Manned Aircraft Design Center of Excellence for Northrop Grumman; Mr. Jim Girard, Vice President & Chief Human Resources Officer for L3Harris; Mr. Andrew Rush, President and Chief Operating Officer for Redwire; and Mr. Gary Spulak, Vice-Chairman of the Board for Embraer Aircraft Holding, Inc.

The panelists began by making opening remarks and providing brief backgrounds for each of their companies.

Ms. Dreggors said that Northrop Grumman employs over 90,000 people globally and that the firm is a leader in the aerospace and defense industry, supporting the U.S. Department of Defense, NASA, and allies around the world. She stated that Northrop Grumman's product lines continue to grow as they continue to innovate and support

their customers. Ms. Dreggors explained that a few of the highlights of Northrop Grumman's historical legacy are the Apollo lunar module and the B-2 stealth bomber. She said Northrop Grumman promotes national security and human innovation, and the company has a significant footprint in Florida. Ms. Dreggors stated that Northrop Grumman has been in the state since the 50s and employs more than 7,500 people in Florida. She explained that their operations focus on aircraft design, production, and modification as well as space launch vehicle support at the Cape, a variety of manufacturing and design of payloads around electro-optical and infrared technologies and microelectronics, along with advanced networking capabilities and distributed mission training systems, not only for internal products but a variety of external customers as well.

Ms. Dreggors said she looks forward to continued partnership with the State University System to bring diverse talent into her organization and grow the pipeline.

Mr. Girard said that L3Harris is located on the space coast, which is a thriving aerospace hub in Melbourne, Florida, along with many other companies. He stated L3Harris employs 49,000 people globally and 8,500 in Florida. He said L3Harris has also been in Florida since the 1950s and is primarily a defense company providing both components and full system solutions to defense, military, and intelligence agencies globally. Mr. Girard explained that L3Harris is an avid supporter of hiring from Florida universities and annually hires 1,000 people from college campuses across the U.S. He said about 20 to 25% of those hires were from Florida institutions. He stated that hiring diverse technical talent and increasingly software engineering talent is something that the aerospace industry in Florida can use as a competitive advantage.

Mr. Girard said that while several people on the panel represent competitors, they all share the common interest of improving and creating a thriving educational base in Florida, in particular a STEM base.

Mr. Rush stated that Redwire Space is an emerging space company focused exclusively on serving the national security, civil, and commercial needs in orbit. He said Redwire serves as a trusted mission partner to help enable other companies to carry out missions and introduces new and innovative technologies that will form the basis of the space infrastructure going forward. Mr. Rush explained that Redwire is based in Jacksonville, Florida and employs around 500 people in the United States, with about one-third of those found in Florida.

Mr. Rush said that Redwire is very supportive of the State University System and that he is a product of the System, having graduated from the University of North Florida with a degree in Physics.

Mr. Spulak stated that Embraer is a global aerospace company headquartered in Brazil and is the third-largest commercial aerospace manufacturer after Boeing and Airbus. He said the company designs and manufactures aircraft for business aviation as well as defense and security. He explained that Embraer is now over 50 years old with its largest market is in the U.S., especially for commercial and executive business aviation,

where the firm has a significant presence over the last 42 years in the state of Florida. He said the company's administrative headquarters is in Broward County in Fort Lauderdale, which also hosts the headquarters for the firm's commercial aviation sales and customer support. He said Embraer's global customer headquarters for business aviation is in Brevard County in Melbourne, where the company markets, manufactures, and delivers aircraft to U.S. and global customers.

Mr. Spulak stated that supporting the workforce in the state of Florida is very important to Embraer, and recruiting university graduates has become a value-driver for the company.

Chair Silagy asked the panelists to identify the key areas of focus when attracting talent and the most often targeted degrees when hiring new employees. Mr. Spulak responded that his firm feels that the State University System produces qualified graduates that can fill most of his company's recruiting needs. He said Embraer traditionally recruits locally within the state, and they find success, especially with graduates for entry-level positions in management and engineering. However, Mr. Spulak indicated more difficulty in recruiting very specific, high-level skills in certain areas like artificial intelligence, disruptive technologies, electrification, and certain automation elements. Mr. Spulak said his firm sometimes recruits from outside the state from institutions with specialty programs in these areas. Mr. Spulak said Embraer also hires OPT students regularly and partners with local, state, and private institutions and even high schools to support recruitment.

Mr. Spulak stated that many of the openings at his firm require three to five years of work experience, so institutions need to work on curriculum and internship opportunities to help expand work experience for new graduates. He said that to keep up with institutions outside the state, Florida universities need to develop initiatives to drive an equivalent level of experience at graduation. Mr. Spulak described a program designed by Embraer and a high school called the Aviation Assembly and Fabrication Program, which is an advanced training program and orientation process that allows new graduates to be immediately productive and add value to the enterprise right away.

Governor Kitson asked Mr. Spulak if his firm had reached out to SUS institutions to propose similar programs or explain their talent needs. Mr. Spulak replied in the affirmative. He said Embraer has other types of partnerships, such as one with UCF, where his company hires a lot of graduates coming from their programs. He said the progress has been good working with SUS institutions. He stated that requiring internships was probably the best way to implement improvements in providing work experience to university students.

Chair Silagy asked what Northrop was focusing on when it comes to recruiting. Ms. Dreggors replied there were likely common elements across the industry, such as knowledge and experience around airworthiness. She said the universities tend to focus on going deep in technical skill areas but that her firm was looking for more breadth of knowledge in many cases to help get aircraft and systems certified. She said Northrop was also focusing on going entirely digital to help streamline their time to

market. Ms. Dreggors said new graduates need to understand how to communicate and interact with their peers in other departments in a digital environment. She noted that software coders, systems engineers, and mechanical designers must work in the same digital thread, work to the same requirements, and understand how to interact to accomplish the design and meet the customer's needs quickly.

Ms. Dreggors stated that students should be using the same digital tools in school used in the industry. Otherwise, new graduates must be trained or retrained on different software platforms, which costs time and money. She also reiterated that internship programs are vital for students and employers. Ms. Dreggors then asserted that diversity is essential to their workforce, including diversity of thought, which powers innovation.

Chair Silagy noted the theme around internships was coming through loud and clear. He said Florida Power and Light's internship program was vital as well. The Chair acknowledged that getting through the security clearance process is essential to the aerospace industry and that the earlier students could do that, the better. Chair Silagy also commented that his company looks for soft skills, critical thinking, and problem-solving when recruiting.

Chair Silagy asked whether the panelists focused on recruiting new graduates or employees with more job experience and how the firms go about recruiting those individuals. Mr. Girard replied that L3Harris is a traditional college recruiter in that they hire fifteen to twenty percent of their total hires per year off of the university campus. He said they build their talent programs around the onboarding, the development, and the growth of new college graduates throughout their technical and management ranks to build out from within the corporation. He said L3Harris typically recruits from fifteen partner schools where they have developed relationships over time. Mr. Girard indicated that about one-third of their new engineering hires were in software, an ever-increasing number throughout the industry. He said it is essential for all engineering disciplines to graduate with a core of software and computer science skills to accommodate this shift in the industry.

Mr. Girard said that not many Florida universities are well known for being a supplier of talent for the aerospace and defense industry, which serves as both a challenge and an opportunity.

Governor Jones asked whether the lack of training on specific software platforms was a significant problem for new graduates coming out of the university system. Ms. Dreggors responded that her company typically only offers tool-specific refresher training to get new hires up to speed. She said the various mechanical design tools are generally very similar and that if students learn on any one of the industry-standard packages, it prepares them to come in ready to work. She said there were opportunities in software development tool suites related to automating software coding that should be explored.

Governor Jones commented that it was a critical item to get new graduates up to speed quickly in the work environment and that universities should be using similar software packages to what businesses are using when training students. Governor Jones then asked if the panelists were seeing any other states or countries that are working well in integrating a high school to college to employment continuum.

Ms. Dreggors responded that she did not have a solid example of what Governor Jones was describing but making a connection early with students and their passions is vital. Ms. Dreggors explained that she graduated from the University of Central Florida twice and that she is proud of Florida's university system. She stated that in Northrop Grumman's nationwide recruiting efforts, four of the top ten institutions are Florida schools. She explained that there is a huge retention advantage to recruiting local talent as those individuals are more likely to stay in Florida.

Mr. Spulak said he had asked university leadership why they do not train on specific software packages or in areas like Lean Six Sigma. He said these things would add immediate value to recent graduates. He explained that the licenses for these products are very expensive, which is a potential barrier for the institutions.

Mr. Spulak went on to describe an in-house training program developed by Embraer in Brazil that takes recent university graduates with little or no experience and accelerates their development into more productive employees. He suggested the universities could develop similar programs in partnership with industry. Governor Jones agreed with the suggestion based on his experience in his industry.

Mr. Girard added that building the STEM pipeline has been a focus in his community for a long time. He said it is important to identify new ways to attract current students to the aerospace and defense industry. He said universities could help in these efforts by considering this when marketing the programs and developing curriculum.

Chair Silagy said that universities should consider including programs like Lean Six Sigma in their curricula because it would differentiate SUS graduates in the marketplace. He asked Mr. Rush about his combination of education in both physics and law and whether he had always intended to work in the aerospace field. Mr. Rush replied that he had initially intended to be a space researcher, but he started a business during his undergraduate training that led him to law school. He explained that it is not just scientists and engineers that make up the aerospace industry. He said talented business and operations professionals are also needed to be successful.

Governor Self said that there were two distinct groups involved from the faculty perspective, with the first being the external advisory boards and the second being internal curriculum committees. He questioned whether there was enough interaction between these groups at the institutional level to affect positive change to make graduates more competitive. He also stated that it would be in the System's interest to partner with industry to develop new and exciting graduate programs so businesses would not have to create internal training programs.

Governor Self asked whether the panelists felt, as external advisors, they get enough access to university faculty. Ms. Dreggors said her company has a number of people who participate on university advisory boards, but there is not much discussion around how industry can influence curriculum. She said the existing forums could be modified to address this issue. Mr. Spulak added that the influence of advisory boards on implementing change in curriculum appears to be limited. Chair Silagy agreed that businesses should have an opportunity to influence curriculum. Governor Edge suggested that institutions should review required introductory courses to align them more closely with workforce needs.

4. Concluding Remarks and Adjournment

Chair Silagy introduced Dr. Marcy Muldrow Sanders, the National Security Innovation Network's University Program Director for FAMU and the State University System. The Chair reminded the committee about UCF Board Chair Bev Seay's presentation last September describing this new system initiative. He said the System MOU with the Florida Defense Alliance, a division of Enterprise Florida, outlines the intent to work collaboratively towards supporting economic development within Florida's defense ecosystem. He stated that Dr. Sanders is coordinating the initiative on behalf of the System.

Ms. Sanders spoke briefly regarding her work with the National Security Innovation Network and agreed to return later in the fall to more fully brief the committee on her progress.

Having no further business, Chair Silagy adjourned the meeting at 11:49 a.m.

Eric Silagy, Chair

Roger Strickland
Director, Economic Development