

In Attendance:

Board Members Present: Amy White, Edward Monroe, Rashid Farrell, Amy Thompson, Dr. Padmanabhan Seshaiyer, Dr. Terry Whipple, Dr. Yu-Shen Lin, Shaina Srivastava, Victoria Chua

Board Members Not Present: Rajbans Joshi

Ex-officios and Staff: JC LaRiviere (Office of the Attorney General), Emily Salmon (SCHEV), Ada Sue Siler (Science Museum of Virginia Staff), Asif Bhavnagri (Assistant Secretary of Labor)

General Public Attendees: Amy Sabarre, Alex Bryant (Director of Programs for FIRST Chesapeake, Paula Leach, Brian Nassbaum, Wendy Newton, Sujay Sri Boldla and Sholk Joshi

Opening and Meeting Administration

Dr. Seshaiyer called the meeting to order at 12:02 p.m. He reviewed the agenda and noted the full schedule of discussions planned for the meeting. Dr. Seshaiyer reflected on the previous meeting, highlighting productive discussions focused on workforce development in the morning and education initiatives in the afternoon.

Dr. Seshaiyer then called for a review of the February meeting minutes and summarized key discussion points and highlights from that meeting before opening the floor for questions or comments.

Mr. Farrell called for approval of the February meeting minutes. The motion was seconded by Mr. Monroe. Following a call for discussion and hearing none, the motion passed unanimously by voice vote.

Dr. Seshaiyer introduced Ms. Kate Maxlow, Senior Advisor to the Secretary of Education, and Mr. Asif Bhavnagri, Assistant Secretary of Labor in the Office of Governor Abigail Spanberger.

Ms. Maxlow thanked the Board for the invitation and expressed appreciation for the opportunity to participate. She shared her background in education, including her

experience as an elementary school teacher, and discussed her current role in helping shape education policy. Ms. Maxlow stated that STEM education and curriculum development are areas of strong personal and professional interest and emphasized the importance of supporting students through critical thinking opportunities and access to educational resources.

Mr. Bhavnagri thanked the Board for the invitation and noted his experience serving under multiple governors in areas including communications, labor, and economic development. He explained that one of the most common concerns expressed by employers is workforce development and the challenge of competing for talent. Mr. Bhavnagri discussed the role of Virginia Works under the Secretary of Labor and emphasized the importance of bringing diverse voices together to better align education and workforce systems with student and employer needs. He also highlighted Governor Spanberger's focus on registered apprenticeships, noting the opportunity to expand apprenticeship models into STEM-related career pathways. He shared that there are currently more than 15,000 apprenticeships across the Commonwealth and emphasized the need to connect high-demand populations with workforce opportunities, wage growth, and skill development.

Board members then introduced themselves and shared their professional backgrounds, experiences, and interest in STEM education and workforce development. During discussion, Mr. Bhavnagri emphasized the importance of helping students build resilience as they prepare to enter the workforce, particularly in light of workforce displacement and changes expected from advancements in artificial intelligence. Ms. Maxlow echoed these comments and emphasized the importance of preparing students to view career transitions as opportunities for reinvention and growth.

Bylaws and Mission

Dr. Seshaiyer then turned the meeting over to Dr. Whipple for a review of the Board bylaws and discussion regarding the development of a mission statement. Dr. Whipple shared a proposed mission statement with the Board and invited comments. Discussion followed regarding clarification of the Board's official name, with members noting that the correct title is the Virginia STEM Education Advisory Board rather than the Virginia Governor's STEM Advisory Board.

Mr. Farrell commented that the mission statement should serve as the Board's "north star" and suggested that reference to appointment by the Governor was not central to the statement's purpose. Mr. LaRiviere clarified that members of the public may

participate during designated public comment periods or when formally presenting. Ms. Maxlow noted that the Board's statutory role is to advise the Governor. Ms. White referenced a previously adopted mission statement and stated that the Board should reconcile the proposed language with both the enabling legislation and prior versions. Dr. Seshaiyer recommended that additional work be completed before adopting a revised statement.

Ms. Maxlow suggested using the Code of Virginia language as the Board's official mission statement while developing a separate vision statement. Dr. Seshaiyer asked about the use of collaborative tools such as Google Docs for drafting purposes. Mr. LaRiviere clarified that live collaborative editing constitutes a public meeting under FOIA requirements and explained that revisions must instead be coordinated through a central individual and discussed during officially established meetings. Ms. White referenced a historical vision statement previously used by the Board, and members discussed postponing further action on the matter.

Dr. Whipple proposed adding additional language to the current mission statement. Mr. Farrell suggested the following wording: "The Virginia STEM Education Advisory Board exists for the purpose of advocating programs and actions beneficial to high-quality STEM education for K–12, college, and university students, aligned with industry needs and fostering innovation and workforce readiness throughout the Commonwealth of Virginia." Ms. Thompson emphasized the importance of adhering closely to the Code of Virginia and expressed concern that the Board had drifted from its core mission and intended accomplishments.

Ms. White then moved to table further discussion on the mission statement until the next meeting. The motion was seconded by Mr. Monroe. Following no additional discussion, the motion carried unanimously.

Dr. Whipple then reviewed proposed updates to the Board bylaws, including increasing the frequency of meetings to six per year, or every other month, to improve communication and continuity. Ms. Salmon commented that if meetings were to occur more frequently, the Board should establish a full annual meeting schedule in advance to improve efficiency and allow members to plan accordingly.

Dr. Seshaiyer called for a motion to approve the bylaw changes with the proposed amendment. Discussion followed regarding the balance of virtual and in-person meetings. Mr. LaRiviere clarified that the Board may not hold consecutive virtual meetings and that no more than 50 percent of meetings may be conducted virtually. Mr. Farrell expressed concern that the Board needed to better define its desired outcomes and accomplishments, noting that members often left meetings feeling that insufficient

progress had been made. He stated that it would be difficult to justify additional meeting time without greater clarity regarding objectives and outcomes.

Dr. Seshaiyer suggested alternative wording for consideration and noted that additional requests for Board involvement would be discussed later in the meeting. He also stated that the Board would play an advisory and oversight role in several upcoming initiatives. Mr. Monroe suggested the use of subcommittees as an alternative to increasing the number of full Board meetings. Dr. Seshaiyer proposed tabling the discussion until the end of the meeting.

Mr. LaRiviere advised that a formal motion would be required to amend the agenda. Ms. White moved to amend the agenda and postpone the discussion until the end of the meeting. The motion was seconded by Dr. Whipple, and all members voted in favor.

FIRST Chesapeake

Following a five-minute break, Dr. Seshaiyer welcomed the guest speakers and stated that the Board would shift its focus from procedural matters to identifying ways members could contribute their expertise to ongoing initiatives. He then introduced Mr. Alex Bryant, President of FIRST Chesapeake.

Dr. Seshaiyer also noted that the Board currently does not have sponsorships for meals or refreshments during in-person meetings and shared that he had asked Ms. Maxlow to help advocate for that support. He further acknowledged that FIRST Chesapeake sponsored lunch at the Board's previous meeting.

Mr. Bryant, President of FIRST Chesapeake, presented an overview of the organization and its impact on STEM education and workforce development. He explained that FIRST stands for "For Inspiration and Recognition of Science and Technology" and was founded at the Massachusetts Institute of Technology in 1989 as an introduction to engineering program. Since its inception, the organization has expanded significantly and currently supports more than 924 robotics teams across Virginia.

Mr. Bryant emphasized the importance of treating STEM as a core component of education rather than an extracurricular activity. He discussed efforts to align Career and Technical Education (CTE) certifications with FIRST programming and reviewed outcome data indicating that 81 percent of FIRST alumni declare STEM majors in college. He also highlighted ongoing infrastructure development efforts, including the creation of Chesapeake Hubs, University STEM Hubs, and expanded access in rural Appalachian and tribal communities. Additional priorities include professional development opportunities for teachers.

During discussion, Mr. Farrell expressed enthusiasm about the organization's engagement with students and noted the significant changes occurring in workforce development due to evolving economic conditions and artificial intelligence. Mr. Bryant responded that FIRST Chesapeake approaches its work as a workforce development initiative by exposing students to diverse local career opportunities and connecting them directly with mentors and professionals in STEM fields. He emphasized that apprenticeships and alternative pathways can provide meaningful opportunities in addition to traditional four-year degrees and stated that programs such as FIRST help students develop creativity and resilience. Mr. Bryant also acknowledged both the benefits and challenges associated with artificial intelligence, including workforce disruptions and layoffs in coding-related fields.

Ms. White asked how communities, particularly smaller municipalities in Southwest Virginia, could establish programs similar to FIRST. Mr. Bryant explained that the process begins with community conversations and awareness-building and noted that several successful teams already operate in smaller Southwest Virginia communities.

Virginia Department of Education Update

Dr. Seshaiyer then referenced a document prepared by Dr. Petersen regarding updates on the VDOE STEM Ecosystems Grant program. He announced that two new ecosystem grants had recently been awarded and noted that the Board would provide oversight and guidance to VDOE on those projects as needed. Dr. Seshaiyer also shared that the STEM ecosystem website remains under development and reminded Board members that biographies and headshots are still needed for the Board's website.

STEM Ecosystem Grant Update

Dr. Seshaiyer next introduced Mr. Brian Nussbaum, Secondary Mathematics Coordinator for Harrisonburg City Public Schools. Mr. Nussbaum shared information regarding the VA-ADMIN initiative, which stands for Advancing Development through a Mathematics Innovation Network. He explained that the initiative focuses on the adoption and implementation of high-quality instructional materials and is funded through a VDOE grant in partnership with Harrisonburg City Public Schools, Virginia Beach City Public Schools, Prince William County Public Schools, TNTP, and George Mason University.

Mr. Nussbaum stated that the initiative seeks to move school divisions beyond curriculum compliance toward instructional integrity, ensuring that high-quality instructional materials lead to meaningful student learning outcomes. Key goals include improving resource alignment, creating sustainable professional learning systems, and

balancing fidelity and integrity in implementation practices. He noted that guides and support tools are being developed for division leaders and teachers and that regional summits will be held later in the year. He emphasized that mathematics is central to STEM education and stressed the importance of collaboration and shared infrastructure so that school divisions are not working in isolation. Mr. Nussbaum stated that the initiative aims to create scalable, open-source infrastructure and noted that upcoming summits will include representatives from 30 school divisions, with participation still needed from Region 8.

Ms. Maxlow asked whether the initiative's open-source resources referred to textbook programs or curriculum resources. Mr. Nussbaum clarified that the initiative is not focused on developing new curriculum materials but rather on supporting alignment with updated standards and advocating for stronger publisher alignment. He explained that the initiative seeks to create partnerships among school divisions, strengthen leadership capacity, and provide tools and crosswalks that support successful implementation and instructional consistency. Ms. Maxlow offered assistance and support for the initiative's efforts.

FIRST Robotics

Students Sujay Sri Boldla and Sholk Joshi from Blue Cheese Robotics, FIRST Robotics Team 1086 at Deep Run High School in Henrico County, presented on their work with the STEM+C initiative in partnership with VDOE. The students explained that STEM+C stands for STEM plus Computing and discussed their advocacy efforts to address disparities in STEM opportunities across different regions of the Commonwealth.

The students reviewed the STEM+C Team Grant Program, a statewide VDOE-managed grant initiative designed to support the creation and sustainability of STEM competition teams. They discussed their advocacy efforts related to Senate Bill 105 and proposed amendments intended to increase accessibility to the program. The students shared that they had advocated for increasing annual funding from \$200,000 to \$250,000 due to federal budget constraints; however, the proposal was not approved during the current legislative session and may be revisited in 2028.

The students explained that current grant guidelines cap funding at \$10,000 per school division and that funds may be used to establish or sustain STEM+C teams. They reported that the program has distributed approximately \$1.9 million in grants and has supported the creation and continuation of 375 STEM+C competition teams statewide. Success stories included initiatives in Portsmouth Public Schools and mentorship programs developed within Henrico County Public Schools. The students also expressed interest in collaborating with regional STEM hubs and requested the Board's support in advocating for expanded funding for the competition grant program.

Ms. Maxlow commended the students for their professional presentation and expressed appreciation for their passion and advocacy efforts. Dr. Whipple also thanked the students for sharing their experiences and perspectives. Ms. White offered to help connect the students with additional networks and advocacy opportunities to strengthen collaboration efforts. Dr. Seshaiyer suggested that the Board consider drafting a formal letter of support for the initiative.

STEM Ecosystems

Ms. Amy Sabarre, Director of K–12 STEM Education and Director of the HCPS Governor’s STEM Academies for Harrisonburg City Public Schools, then presented on the VA-CONNECT STEM Ecosystem initiative. Ms. Sabarre, who serves as the lead for the most recent VDOE STEM Ecosystem grant, praised the student presenters and noted that statewide STEM ecosystem efforts are now beginning to take shape as a result of work initiated by the Board.

Ms. Sabarre explained that the initiative currently includes three regional hubs focused on workforce development, educational access, and regional innovation, with the goal of ensuring that all PK–12 students across Virginia have access to high-quality STEM experiences aligned with regional and statewide workforce needs. Harrisonburg serves as the lead hub, and the initiative seeks to establish systems for collaboration, including shared metrics, calendars, meetings, and resources.

Additional goals include expanding partnerships among state-level organizations and regional stakeholders, securing sustainable funding beyond the current grant period, developing innovative pilot programs, and strengthening collaboration with the STEM Board and VDOE. Ms. Sabarre stated that the hubs are currently located in Arlington, Harrisonburg, and Newport News and noted that hub leaders meet biweekly to coordinate shared resources, equipment, curriculum materials, training opportunities, teacher professional development, and student competitions. She also highlighted strategic partnerships among industry, higher education institutions, and K–12 partners across the statewide ecosystem network.

Ms. Sabarre outlined several requests for support from the Board, including advocacy for continued state investment in regional hub operations and expansion, assistance with federal and state grant writing, guidance on statewide metrics and workforce alignment, and support with networking and partnership development involving industry, higher education, and community organizations. She also noted plans to incorporate student leadership components into future summits and encouraged Board members to participate in upcoming events.

During discussion, Ms. Salmon commented that the Board's long-term vision for statewide STEM ecosystems is beginning to materialize. Ms. Maxlow suggested tracking additional metrics such as dual enrollment participation and the number of teachers credentialed to teach dual enrollment courses. Dr. Seshaiyer emphasized the need to develop a statewide STEM dashboard and repository for data and resources. Ms. Sabarre shared an additional document outlining statewide partners involved in regional STEM events.

Ms. Newton asked how regional STEM hubs could align programming with workforce sectors projected to experience the highest demand in coming years, particularly for students planning to enter the workforce directly after high school rather than pursuing four-year degrees. Mr. Bryant stated that FIRST Chesapeake would welcome opportunities to collaborate with the regional hubs and offered to share information about upcoming events, including the organization's Mentor Conference at James Madison University on August 8–9.

Mr. Farrell recommended several categories of metrics for evaluating the initiative, including reach and participation data, program and activity outputs, early outcome measures, workforce alignment indicators, and financial and resource stewardship metrics.

Mission Statement Discussion

Ms. White returned discussion to the proposed mission and vision statements, noting that the Board currently has historical statements, newly proposed language, and guidance contained within the Code of Virginia. She emphasized the importance of reconciling these sources into a single statement and allowing it to remain in place for a period of time rather than revisiting or revising it at every meeting.

Ms. White moved to table further discussion of the mission statement until the next meeting. The motion was seconded by Mr. Monroe. Following a call for discussion and hearing none, the motion was carried by verbal affirmation.

Meeting Dates

Dr. Seshaiyer then asked the Board to consider potential dates for the June meeting. Dr. Whipple noted that discussion of the proposed bylaw amendments should also continue at the next meeting. Mr. Farrell moved to postpone further discussion and recommendations regarding the bylaw updates until the next meeting. The motion was seconded by Ms. Thompson. All members voted in favor, with no opposition, and the motion carried.

The Board then discussed scheduling for upcoming meetings. Ms. Thompson noted that June 19 is a federal holiday. Members discussed several possible meeting dates, including June 5, June 12, and June 26. The Board ultimately selected June 5 for the next in-person meeting. Members also discussed a proposed meeting on Friday, May 29, at the Science Museum of Virginia from 10:00 a.m. to 2:00 p.m., which received general consensus support.

Public Comment

During the public comment period, Mr. LaRiviere reviewed the procedures for public comment, including the requirement that speakers identify themselves and the three-minute time limit allotted for each speaker.

Ms. Paula Leach, Director of the Institute for Teaching Through Technology and Innovative Practices at Longwood University, expressed enthusiasm regarding the development of the statewide STEM hub ecosystem. She stated that her organization would like to participate as a partner supporting Region 8 schools and noted the existence of a GEAR UP grant with a STEM focus that may provide additional funding opportunities. Ms. Leach also thanked the students from Blue Cheese Robotics for their presentation.

Adjournment

Ms. White moved to adjourn the meeting. The motion was seconded by Dr. Whipple, and the meeting adjourned at 3:03 p.m.