

**MINUTES
of the
SECOND MEETING
of the
SCIENCE, TECHNOLOGY AND TELECOMMUNICATIONS COMMITTEE**

**July 7-8, 2022
Science & Technology Park Rotunda
University of New Mexico
801 University Boulevard SE, Park North
Albuquerque**

The second meeting of the Science, Technology and Telecommunications Committee was called to order by Senator Michael Padilla, chair, on July 7, 2022 at 10:07 a.m. at the University of New Mexico (UNM) Science & Technology Park Rotunda in Albuquerque.

Present

Sen. Michael Padilla, Chair
Rep. Debra M. Sariñana, Vice Chair
Rep. Joy Garratt
Sen. Shannon D. Pinto
Sen. Harold Pope
Rep. Larry R. Scott

Absent

Sen. William F. Burt
Rep. Jason C. Harper
Sen. Mark Moores
Sen. William P. Soules

Advisory Members

Rep. Eliseo Lee Alcon (7/7)
Sen. Craig W. Brandt
Rep. Gail Chasey
Rep. Kelly K. Fajardo
Rep. Randall T. Pettigrew
Rep. Jane E. Powdrell-Culbert
Sen. Nancy Rodriguez

Rep. Christine Chandler
Sen. Leo Jaramillo
Sen. Bill B. O'Neill
Rep. Andrea Romero
Rep. Linda Serrato

Guest Legislator

Sen. Linda M. Lopez (7/7)

(Attendance dates are noted for members not present for the entire meeting.)

Staff

Mark Edwards, Bill Drafter, Legislative Council Service (LCS)
Sabina Gaynor, Staff Attorney, LCS
Ralph Vincent, Systems Consultant, LCS
Hunter Thomas, Intern, LCS

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file and posted on the legislature's website.

References to Webcast

The time reference noted next to each agenda item in this document is cross-referenced to the webcast of the committee meeting, which can be found at www.nmlegis.gov, under the "Webcast" tab. The presentations made and committee discussions for agenda items can be found on the recorded webcast for this meeting.

Thursday, July 7

Welcome and Introductions (10:07 a.m.)

Senator Padilla welcomed the committee, and members of the committee, staff and the audience introduced themselves.

Welcome and UNM Status Update (10:13 a.m.)

Dr. James Holloway, provost and executive vice president for academic affairs, and professor, Department of Nuclear Engineering, UNM, discussed the UNM 2040 vision, mission, values and goals of the university. Dr. Holloway also discussed the university's research activities and explained the Grand Challenges program that was recently launched at UNM. The presentation can be found here:

<https://www.nmlegis.gov/handouts/STTC%20070722%20Item%201%20Holloway%20Welcome%20and%20Overview.pdf>.

Department of Information Technology (DoIT): Looking at a State Agency Approach for Cybersecurity (11:35 a.m.)

Raja Sambandam, state chief information security officer, DoIT, and Daniel Garcia, project manager, DoIT, discussed the department's work in establishing a state government roadmap for the cybersecurity program. Mr. Sambandam reviewed the accomplishments of the cybersecurity program and described in detail the roadmap through the next four fiscal years. This roadmap includes a security operations center to be established within the DoIT.

Cybersecurity Planning and Risk Management in Public Schools (1:11 p.m.)

Dr. Richard Bowman, chief information and strategy officer, Albuquerque Public Schools (APS); Grant Banash, Poms and Associates, and technology consultant, Public School Insurance Authority; Demetrius Brandon, chief information security officer, Public Education Department; and Ovidiu Viorica, program manager, Broadband and Technology, Public School Facilities Authority (PSFA), discussed the current plan for cybersecurity in New Mexico public schools. Mr. Brandon described the New Mexico K-12 Task Force's strategic cybersecurity goals for developing partnerships to create policies and provide guidance in the best practices for safeguarding public schools against cybersecurity threats. Mr. Viorica discussed the PSFA project to create a statewide education broadband network and the provision of expert network and cybersecurity services for this network. Mr. Viorica also discussed a preliminary four-year

budget to support the K-12 network and cybersecurity program. Mr. Banash discussed how Poms and Associates has assisted the Public School Insurance Authority with its initiatives to assess cybersecurity issues for school districts. Dr. Bowman discussed the issues that APS has dealt with in regard to cybersecurity, and he urged immediate investment and action.

UNM Rainforest Innovations (UNMRI) (2:31 p.m.)

Lisa Kuuttilla, chief executive officer and chief economic development officer, UNMRI, described the technology transfer activities that UNMRI is involved in and reported on the current status of UNMRI. Thomas Stephenson, co-founder, chief executive officer and board chair, Pajarito Powder; James Freyer, chief scientific officer, BennuBio, Inc.; and Dr. Alexander Hafez, president, Circular Genomics, assisted Ms. Kuuttilla in describing specific commercialization projects with which UNMRI has been involved. Dr. Stephenson described the start-up company Pajarito Powder, which focuses on non-platinum fuel cell catalysts. Mr. Freyer described the start-up company BennuBio, Inc. and its work developing a flow cytometer, known as the Velocyt. Dr. Hafez described his work developing the start-up company Circular Genomics, which uses RNA-based diagnostic assay to assist physicians in treating major depressive disorders. The presentation can be found here:

[https://www.nmlegis.gov/handouts/STTC%20070722%20Item%204%20UNM%20Rain%20Forest%20Innovations%20Overview%20\(Kuuttilla\).pdf](https://www.nmlegis.gov/handouts/STTC%20070722%20Item%204%20UNM%20Rain%20Forest%20Innovations%20Overview%20(Kuuttilla).pdf).

Water Challenges — Resilience to an Increasingly Arid and Variable Climate (3:31 p.m.)

Dr. Jennifer Rudgers, regents' professor, Department of Biology, UNM, and Dr. Marcy Litvak, professor, Department of Biology, UNM, discussed the effects of climate change on New Mexico and the role that UNM is playing with research programs studying sustainable water issues. One of the UNM Grand Challenges is focused on sustainable water resources, and Dr. Rudgers and Dr. Litvak discussed the goals and activities of this challenge program. Dr. Rudgers described the Sevilleta Long-Term Ecological Research Program, which studies changes to the climate, the Bosque Ecosystem Monitoring Program, which studies the management of the Rio Grande ecosystem and the Metals Exposure and Toxicity Assessment on Tribal Lands in the Southwest Superfund Research Program Center, which studies the environmental and health impacts of mine waste. The presentation can be found here:

<https://www.nmlegis.gov/handouts/STTC%20070722%20Item%205%20Water%20Challenges%20Litvak%20Rudgers.pdf>.

Recess

The meeting recessed at 4:23 p.m.

Friday, July 8

Reconvene

Senator Padilla reconvened the meeting at 9:09 a.m.

Create New Mexico: Expanding Education Through Digital Learning (9:09 a.m.)

Katherine Crociata, government relations consultant, Adobe Systems Inc., and Vanessa Alarid, consultant, Adobe Systems Inc., introduced the Create New Mexico program that uses Adobe's digital tools, in particular Adobe Creative Cloud, to assist teachers in teaching and students in learning. Funding was provided by the legislature for the Public Education Department to build the Create New Mexico program in fiscal year 2023. To continue the program, the department will need \$1.42 million annually. The presentation can be found here:

<https://www.nmlegis.gov/handouts/STTC%20070722%20Item%206%20Create%20NM%20STEM.pdf>.

Approval of Minutes (9:40 a.m.)

The committee approved the minutes of the June 2, 2022 meeting.

What is Quantum Information and How Will It Impact New Mexico, the United States and the World (10:04 a.m.)

Dr. Andrew J. Landahl, distinguished research and development scientist, Sandia National Laboratories, and research professor, Department of Physics and Astronomy, UNM, provided an overview of quantum information and described some of the research projects in New Mexico on quantum technologies.

Quantum New Mexico (10:36 a.m.)

Dr. Rick Muller, senior manager, Advanced Microsystems, Sandia National Laboratories, and Dr. Ivan Deutsch, regents' professor, and director, Center for Quantum Information and Control, UNM, discussed the quantum information science research at Sandia National Laboratories, Los Alamos National Laboratory and UNM. Dr. Deutsch described the prior work in quantum research of these entities and discussed the opportunity to create the Quantum New Mexico Institute, with the objective of bringing together and expanding the research and development in quantum information science and technologies. The presentation can be found here:

<https://www.nmlegis.gov/handouts/STTC%20070722%20Item%208%20--%20Sandia-UNM%20presentation%20--%20Quantum%20NM%20.pdf>.

Advanced Manufacturing: Energy Power Management for Renewables and Recruitment of Industry (11:10 a.m.)

Dr. Ganesh "Gunny" Balakrishnan, director, New Mexico Established Program to Stimulate Competitive Research (EPSCoR), and professor and associate chair, Department of Electrical and Computer Engineering, UNM, described the activities of the EPSCoR office, which provides research, education and outreach support for all institutions in the state of New Mexico. Dr. Balakrishnan also described several of the EPSCoR projects, such as the NM SMART Grid Center, which focuses on sustainable electric grids, and the Center for Research Excellence in Additive Technology and Education project on additive manufacturing, also known as 3D printing. EPSCoR is a federal-state partnership program created by the United States Department of Energy and is designed to enhance the capabilities of designated states and

territories to conduct sustainable and nationally competitive energy-related research. The presentation can be found here:

<https://www.nmlegis.gov/handouts/STTC%20070722%20Item%209%20EPSCoR%20Presentation.pdf>.

Public Comment

There was no public comment.

Adjournment

There being no further business before the committee, the meeting adjourned at 11:43 a.m.