ICASA: Healthcare Workforce Dashboard Briefing

Institute for Complex Additive Systems Analysis

July 21st, 2025

Institute Overview

The Institute for Complex Additive Systems Analysis (ICASA)
- Created by NM Legislature in 2001, 21-11-8.1 NMSA, 1978
- Research Division of New Mexico Tech (NMT)
- Base funding via Research and Public Service Project (RPSP)

Mission: To serve as a pivotal research component of New Mexico Tech (NMT), focusing on the design and development of strategies for safeguarding critical infrastructures.

Vision: Empowering the next generation of critical thinkers to tackle the intricate challenges posed by an increasingly interconnected world.

Key Features:

- **Interdisciplinary Approach:** ICASA adopts a cross-discipline perspective to address complex issues.

- **Research Spectrum:** Our work encompasses both basic and applied research, along with software development

- **Support for Education:** We have provided support to over 200+ students, fostering their growth and development.

Recognition: ICASA holds legislative recognition as a RPSP. We engage in projects at the federal, national, international, and private-sector levels. Notably, RiskSense emerged as a spin-off from ICASA.

News Release
U.S. Sen. Pete Domenici & U.S. Rep. Joe Skeen

FOR IMMEDIATE RELEASE
FEBRUARY 7, 2001

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DOMENICI & SKEEN: N.M. TECH TO LEAD NATIONAL SECURITY RESEARCH ON INFORMATION INFRASTRUCTURE SYSTEMS

iCASA Will Be Unique Public-Private-Academic Venture

WASHINGTON -- U.S. Senator Pete Domenici and Congressman Joe Skeen, both R-N.M., today announced that a New Mexico university will host a new cooperative center whose national security work will serve to help protect U.S. computer, telecommunications or power systems vulnerable to failure or cyber attack.

Domenici and Skeen said the new **Institute for Complex Additive Systems Analysis (iCASA)** will be housed at the New Mexico Institute of Mining and Technology in Socorro, N.M. iCASA is a unique cooperative endeavor between the Defense Department, other federal agencies, academia and the private sector. It is funded through a $5 million appropriation secured by the two New Mexico lawmakers in the FY2001 Defense Appropriations Act.

iCASA will be dedicated to the analysis of complex interdependent systems, i.e., networks and critical infrastructures--electrical grids, water distribution systems, and the computer networks on which they rely. In addition to developing fundamental comprehension of large-scale systems, iCASA will also focus on training and education of future experts to deal with assuring the stability of interdependent systems in the United States.

"iCASA will begin addressing one of the most complex vulnerabilities facing the United States today. This is not the threat of mass destruction, but rather mass disruption. The unintended or deliberate disruption to any number of the daily functions upon which our military, as well as our economic prosperity, rely could be catastrophic," Domenici said.

"As public officials it is our responsibility to ensure that our national security and most critical information systems are safe from attacks. We must provide the necessary training and education to maintain the highest level of security for our information systems," Skeen said.

NEW MEXICO TECH
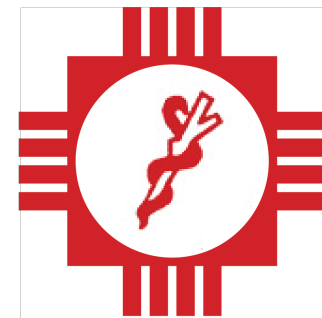INSTITUTE FOR COMPLEX ADDITIVE SYSTEMS ANALYSIS

Project Funding

- **2024 Appropriation: $750,000 to New Mexico Tech/ICASA**
  - To establish and maintain a state healthcare workforce dashboard for expenditure through fiscal year 2027: HAFC/H 2 AND 3, aa - Page 218.

- **Line item 17 states:** "For the Institute for Complex Systems Analysis to establish and maintain a state healthcare workforce dashboard for expenditure through fiscal year 2027."

http://www.nmlegis.gov/Sessions/24%20Regular/final/HB0002.pdf

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INSTITUTE FOR COMPLEX ADDITIVE SYSTEMS ANALYSIS

Project Purpose

- Public facing *interactive* dashboard that examines Health workforce data within New Mexico
  - Focusing on Nurses, Physicians, and EMTs
- Initial Efforts focus on:
  - Retention Rates
  - FTE/PTE
  - Supply/Demand

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INSTITUTE FOR COMPLEX ADDITIVE SYSTEMS ANALYSIS

Current Stakeholders

Stakeholder vision:

"Make New Mexico an Attractive Place to Practice Medicine."

Current Data Issues:

- **3D Health Data (Paid Data)**
- **NPI Data (Open Source)**
- **BON Data (Provided)**

- **Pending MOU's:**
  - **Hospital Association**
  - **Department of Health (EMS)**
  - **New Mexico Healthcare Authority**
  - **NMLDS (Longitudinal Data System)**

Demo