

# National Security & Defense Industry

*An Important Economic  
Engine for Rhode Island*

*Seventh Annual Senate  
Education Summit*

*A Twenty-First Century Education  
for a  
Twenty-First Century Workforce*

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National  
Security &  
Defense

100+ member  
companies

SENEDIA's vision is to be a catalyst for thought leadership and technical innovation in **undersea technology, cybersecurity** and other critical defense technologies.

Our mission is to enable the development of innovative technology, foster thought leadership and facilitate the required **workforce development** necessary to meet industry needs.

# RI Defense Cluster The Economic Impact

- \$4.3 Billion Annual Economic Benefit to the State of RI
- 33,000 RI jobs
- Highest RI Wage Sector
  - Defense Civilian Worker - average salary \$96K
- Significant Multiplier – every *100* defense jobs created supports another *119* other jobs

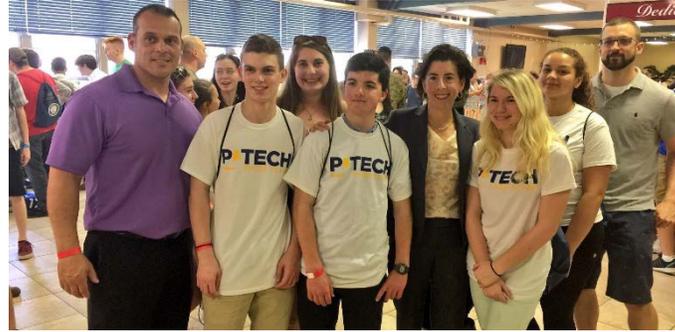
# RI Defense Cluster Economic Outlook



**76%** OF RI COMPANIES DOING  
BUSINESS WITH THE  
DEPARTMENT OF DEFENSE (DOD)  
SEE EXPANSION OPPORTUNITIES



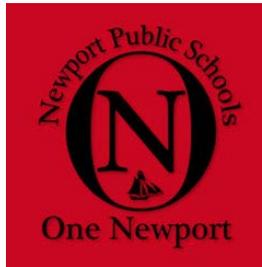
**91%** OF COMPANIES ARE HAVING  
DIFFICULTY HIRING THE  
NECESSARY SKILLED WORKFORCE  
TO MEET INDUSTRY NEEDS



**P**  **TECH**  
RHODE ISLAND



COMMUNITY  
COLLEGE  
OF RHODE ISLAND



# *What does our future workforce need...*

- *Ethics and integrity* are of the utmost importance
- *Critical thinkers* and problem solvers that will develop the technology of tomorrow
- *Technical literacy* with the ability to pull together all disciplines with an application to solve a real world problem
- The understanding that we operate in a global world and we are all *globally connected*
- *Flexibility and adaptability* to people, to change and to varied situations
- Someone who has *initiative* and *perseverance* in their everyday approach
- *The excitement, passion and commitment to make a difference*



## Seal Whiskers

Use whiskers as a sensory receptor for underwater detection of objects

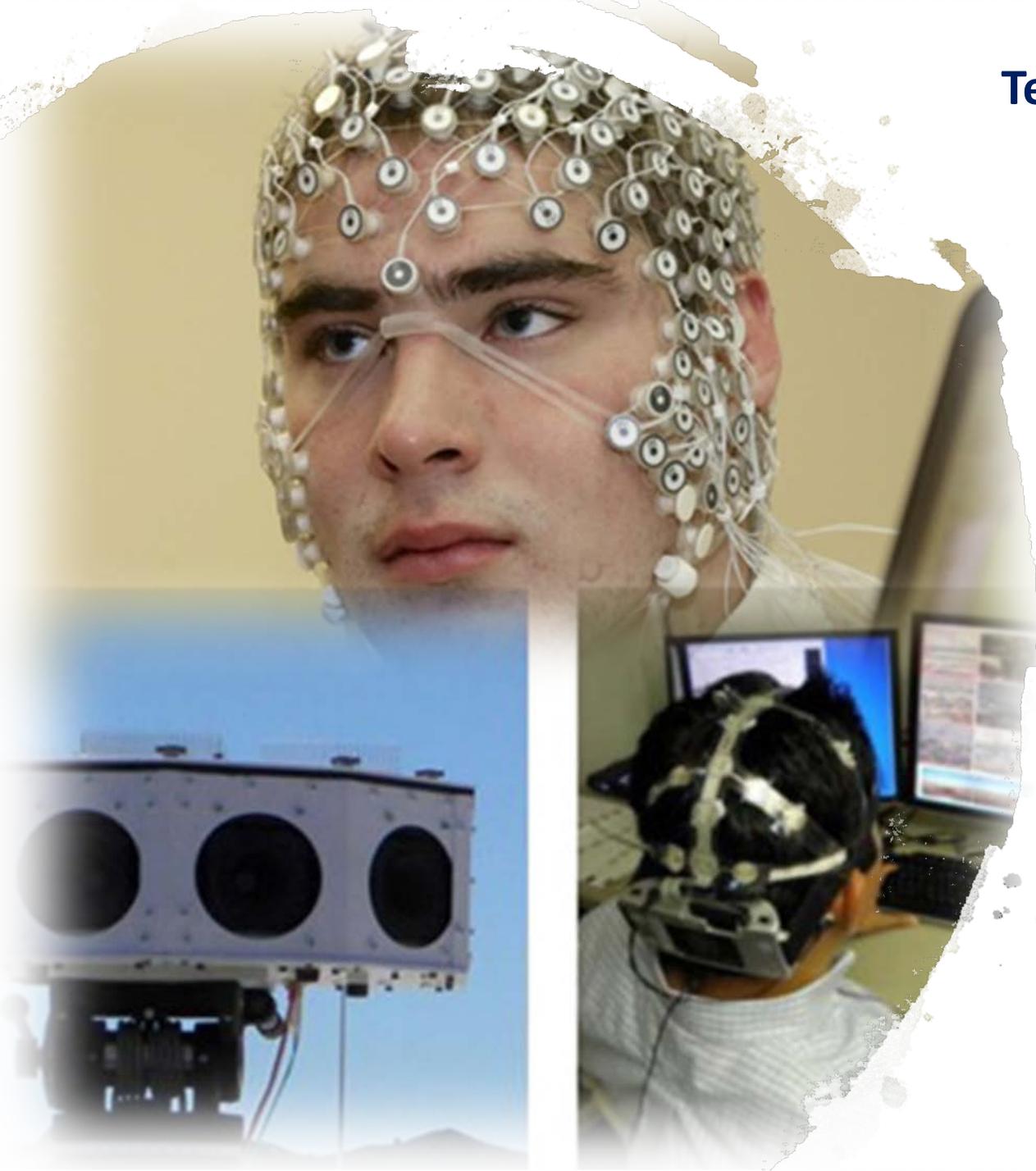
3D print representative seal whiskers using varying combinations of flexible and rigid materials to best mimic actual seal whiskers characteristics in water



*Catalyst for Thought Leadership and Innovation in Undersea Technology, Cybersecurity and Defense Technologies*

## Telepathically Communicate with a Drone Swarm

The US military's Defense Advanced Research Projects Agency (DARPA) has created a brain-computer interface that enables a person to control everything from a swarm of drones to an advanced fighter jet using nothing but their thoughts and a special brain chip.

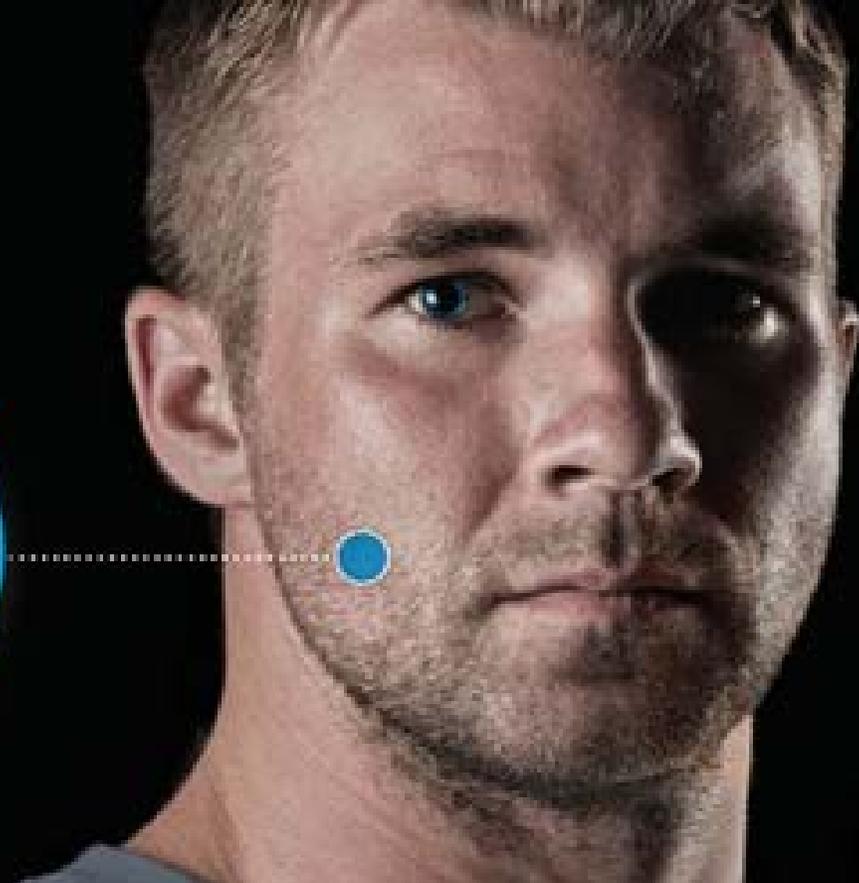


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How Sonitus works



Where Sonitus works

Dubbed the Molar Mic, it's a small device that clips to your back teeth. The device is both microphone and "speaker," allowing the wearer to transmit without any conspicuous external microphone and receive with no visible headset or earpiece. Incoming sound is transmitted through the wearer's bone matter in the jaw and skull to the auditory nerves; outgoing sound is sent to a radio transmitter on the neck, and sent to another radio unit that can be concealed on the operator. From there, the signal can be sent anywhere.

## The Military Now Has Tooth Mics For Invisible, Hands-Free Radio Calls

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*Artificial Intelligence*

*Machine Learning*

*Deep Learning*

*Big Data*

*..... are we preparing our students to be the  
workforce for the future?*



- *Critical thinkers*
- *Problem solvers*
- *Teamwork*
- *Communication*
- *Diversity*
- *Adaptability*
- *Curiosity*
- *Real world hands on experience*

*“Its not about the technology of today...its about developing and advancing the technology of tomorrow”*

