To: **RADM Tim Gallaudet**
Re: **NOAA Artificial Intelligence Strategy Comments Summary and Recommendations**
From: **Jamese Sims, William Michaels, Sid Boukabara, and the AI Executive Committee**
Date: **9 January 2020**

Response to Public Comments on the NOAA AI Strategy

Summary: The public comments support NOAA's direction to utilize AI to advance NOAA's requirements-driven mission priorities, and it was acknowledged that this effort will result in "reduced cost of data processing, and provide higher quality and more timely scientific products and services for societal benefits." The public comments applaud NOAA's effort to create synergy across the NOAA Strategies, and emphasized "integrating broader and more robust interoperability efforts into each of the strategies to ensure a unified approach." There is clear connectivity of the NOAA AI Strategy with each of the other NOAA Strategies, and the next phrase of developing the NOAA Implementation Plans will focus on the need to establish operational efficiencies collectively across the NOAA line offices and its complimentary partnerships.

<u>Notable Public Comments to Consider</u>

1. **"Cost Effectiveness"** - NOAA strives and has examples of AI machine learning algorithms that have significantly reduced data processing from months to days; therefore, believes <u>both reducing data processing costs and increasing analytical capabilities are immediate benefits of applying AI technology.</u>
2. **Partnerships:** Pertinent to the need to increase awareness and collaborations on the rapidly evolving AI technology, there was the recommendation to <u>consider an "annual R&D prize competition" and "Distinguished NOAA AI Lecture Series."</u>
3. **Center of Excellence:** Public comments generally supported the NOAA AI Strategy in the "creation of a Center of Excellence (CoE) for AI with the express purpose of breaking down organizational boundaries to improve efficiency, effectiveness, collaboration, and usage of AI across the agency." <u>However, one commenter questioned how the proposed NOAA AI Center and a NOAA oversight committee would work effectively across the organizational boundaries within the agency. NOAA recognizes that these strategies are the catalyst for a cultural change within the NOAA enterprise, and the next phrase of establishing the implementation plans will specifically address this concern to ensure synergy of the NOAA strategies in support of the cross-functional mission priorities across the NOAA line offices.</u>
4. **AI Steering Committee:** There is also support to establish an AI Steering Committee for oversight on the implementation of the NOAA AI Strategy. This should <u>include a "leadership role in convening and enabling public-private sector collaboration in developing AI policies, standards, and technology," and it is further suggested that an AI Consortium could be chartered to assist with these tasks. There was also a commenter that recommended establishing both an AI and Data Governance Committee,</u> which again emphases the strong linkage between improved data accessibility and AI technology.
5. **Budget:** Objective 3.1 "Establish budget and prioritization processes so that AI-based environmental research that shows improved skill, performance, computational and cost efficiency can be transitioned into operations."

*There were grammar and syntax comments that will be incorporated in the final draft of the document.

<u>Notable Comments Requiring No Additional Action</u>

1. **Links to Cloud Strategy:** There is recognition that the NOAA AI Strategy is closely linked to the NOAA Cloud Strategy to improve data accessibility and use of available open source machine learning frameworks. As suggested, NOAA will consider potential hybrid solutions that blend on-premises and off-premises resources while leveraging the cloud for work" such as AI analyses.
2. **Technological Advancements and Discoveries:** It was well noted that the "integrity of NOAA's discoveries and the presentation of its data analyses to future political, scientific, and citizen stakeholders must be founded on the best information technology available," and "that technology will need to be pushed closer to the edge of analytical discovery to leverage NOAA's larger investment in infrastructure."
3. **Training:** There is agreement in the public comments on the need for "timely training opportunities in emerging technologies create a more adaptive and agile workforce that is better equipped to keep pace with rapid technological advancements," and highly qualified workers are critical for producing high quality scientific products and services that are reliable and credible.

**There were several positive comments supporting the strategy and its objectives and comments that will be incorporated in the implementation plan.