Date 5/31/2019

To: National Institute of Standards and Technology,
            100 Bureau Drive, Stop 2000,
            Gaithersburg, MD 20899

From: Workpology, Inc. (DBA "ProductBio", "ProductBio.com")

Subject: RFI: Developing a Federal AI Standards Engagement Plan

Dear National Institute of Standards and Technology, U.S. Department of Commerce.

I would like to bring to the agency's attention new research and data that is highly relevant for the decision-making process regarding the February 11, 2019, Executive Order on Maintaining American Leadership in Artificial Intelligence (AI) directing the National Institute of Standards and Technology (NIST) to create a plan for Federal engagement in the development of technical standards and related tools in support of reliable, robust, and trustworthy systems that use AI technologies (Plan).

This notice requests information to help NIST understand the current state, plans, challenges, and opportunities regarding the development and availability of AI technical standards and related tools, as well as priority areas for federal involvement in AI standards-related activities.

In the area of developing sustainability standards that cover over 2000+ categories of public procurement typical to government spend on average of both capital and operational expenditures across municipalities, states, and federal agencies, the following areas stand in the way of regulatory proficiency for implementation.

The related research and data summarized below, which is not included within the current regulation text, supports the need for the agency to utilize AI-enabled standards that are reliable and trustworthy. The sources cited can be found at the end of each of the following points:

I. Just 100 companies have been the source of more than 70% of the world's greenhouse gas emissions since 1988, according to a new report, according to The Carbon Majors Report. The implication being that industrial processes in manufacturing are directly responsible and directly addressable with the right standards. [Source: https://www.theguardian.com/sustainable-business/2017/jul/10/100-fossil-fuel-companies-investors-responsible-71-global-emissions-cdp-study-climate-change]

Date 5/31/2019

II. With regards for opportunities for the federal government to reduce the carbon footprint of all government agencies and contractors, prior GSA and EPA research found that the acquisition of goods and services creates a carbon footprint nine times that of buildings and fleets, put together. This was derived from applying an IO LCA to spend data (usaspend.gov). The implication being that procurement, or upstream demand based on how things are made vs. how they are used, matters more than current ongoing efforts in energy and renewables for building and fleet management. [Source: May 19, 2016 presentation by Brennan Conaway, U.S. GSA and Stephan D. Sylvan, U.S. EPA on Integrating sustainability into federal category management, citing "Our acquisition of goods and services creates a carbon footprint nine times that of our buildings and fleet, put together." - Former GSA Administrator Dan Tangherlini video remarks at 2014 SPLC Summit May 21, 2014]

III. President Obama put forth Executive Order 13693 (Source: Sustainable purchasing requirements in EO 13693 and EPA interim standards) for several Federal Acquisition Regulations and increased stringency between 2011-2013 but enforcement and implementation was largely process-oriented (aka. Having an "Environmentally Preferable Purchasing Program" or EPP / EP3 in place) vs. being able to measure green spend via consumption and production performance of products procured. The program was that being told to buy sustainably is meaningless however if one cannot effectively compare products, and one cannot effectively compare products if one does not know the correct standards for each category of product or have access to measurable performance of each individual manufactured product's supply chain practices.

The private sector has been an ideal place to develop intellectual property using AI to find the most sustainable supply chains.

At the cutting edge of data science, ProductBio is a private sector, venture-backed data science technology startup in Silicon Valley providing product category-level decision analytics for sustainable purchasing and merchandising. In seconds, ProductBio reads though millions of raw data sources of production and supply chain information to help institutional buyers at cities, universities and companies find goods and services based on how they were made. ProductBio uses AI (made operable with 2 US Patents Filed) to:

1. Provide new information about sustainability standards previously unavailable and provides this guidance as a scalable resource for producers and consumers of manufactured goods and services; and

Date 5/31/2019

2. Look for the most optimal supply chains using a novel measurement ability for evaluating information about products, pushing manufacturers to become better at offsetting impact liabilities per dollar in their product categories.

By extracting meaningful data from the complex noise of supply chain production processes, we are setting the standards for which sustainability is understood and measured—perpetually moving the needle forward on sustainability and what it means. We have brought the latest in environmental and data science tools together, to create better purchasing compliance using AI-derived standards for over 1000+ manufacturing categories and have delivered optimization outcomes for the individual, team and organization at the product category level for buyers and sellers of foods, goods, and services, currently influencing over $2.8B of public procurement spending.

In addition to cutting out much of the research involved in finding the right balance between cost and sustainability, ProductBio's platform automatically compiles standardized sustainability and corporate social responsibility reports for users who need to prove they're supporting green, ethical, and local products. We are the most comprehensive database translator service of impact area to supply chain work step manufacturing practice specification and threshold to product attribute to eco labeling to product category data provider to-date, and our technology stands ready to assist any regulatory capability in enforcing sustainable procurement and manufacturing performance assessment using the reliable metrics of impact offsets per dollar and a benefit calculator normalized to each category of manufacture to replace the outdated qualitative and noisy marketplace of eco labeling.

Please take this research into consideration when making any assessments on how to develop technical standards in sustainability utilizing AI research.

Sincerely,
Angela Chen
Qualifications: B.A. UC Berkeley, M.Phil University of Cambridge, Founder of ProductBio