

# The role of scientific advisory bodies and Biden administration: A laboratory for an evidence-based decision-making process?

by Simone Penasa

**Abstract:** This article provides an analysis of the approach taken by Biden administration to the involvement of scientific consultative bodies within its decision-making processes. Particular relevance is devoted to the political commitment to enforce an evidence-based method of political decision-making, which is concretely defined in a number of institutional and regulatory initiatives, that may contribute to defining Biden administration as a laboratory in this context.

**Keywords:** US government; decision-making process; evidence; consultative bodies.

## 1. Biden administration and scientific advice tools: evidence-based approach as a common standard?

Examining the role attributed to scientific advice within the Biden administration's decision-making practices is of particular interest for two reasons, one structural and the other contextual. From the structural perspective, the principle – or, more appropriately, the method – of evidence-based policy appears to have now acquired the function of a standard at the comparative level. The openness of political processes to data, expertise and technical-scientific achievements is, in fact, an element that the courts – national and supranational – tend to assess when judging the consistency and appropriateness of political choices made in scientifically characterised areas. This concept of scientific reasonableness has been proposed elsewhere,<sup>1</sup> and other authors have referred to the idea of science-based laws.<sup>2</sup>

The same idea, which describes a specific, albeit highly differentiated, method of decision-making, can be applied also to the exercise of functions by the executive and public administration. These functions are characterised in a structural manner by decision-making processes within

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<sup>1</sup> S. Penasa, *La "ragionevolezza scientifica" delle leggi nella giurisprudenza costituzionale*, in *Quaderni costituzionali*, 4, 2009, 817-841.

<sup>2</sup> A. Iannuzzi, *Il Comitato tecnico-scientifico nella gestione dell'emergenza sanitaria: un bilancio dell'esperienza utile per far emergere prospettive di riforma*, in *Osservatorio sulle fonti*, 1, 2022, 524, identifies three types of law: science-based, science-driven and data-driven laws.

which the presence of specific skills and the need to acquire particular knowledge and data are functional to a more effective and efficient designing of public policies.

Carrozza defined the idea of “evidence based policy making” as a process based on a scientific approach to the choices of parliamentary, governmental and administrative bodies, capable of leading them back to a scientific methodology based on measurable and – to the degree possible – verifiable data.<sup>3</sup> Linked with this approach is the concept of “rational law”, or regulation, which identifies the “product of complex intellectual process which makes use of tools to seek and analyse information with certain boundaries and to draw decision from this assessment which is justifiable on the basis of present information and context and adaptable to changes in insights or techniques”.<sup>4</sup>

With a view to ensuring that discretionary decisions are also scientifically sound, avoiding the risk of policy assessment being replaced by technique, the primary function of scientific advice can be identified in the “knowledge that can help to provide evidence to the policymaking process and improve the quality for generating, selecting, assessing and evaluating policy option”.<sup>5</sup> Evidence, thus, does not coincide with incontrovertible or error-free data but more closely with the provision of a “knowledge claim backed up by a recognised scientific procedure or method within the scientific domain for which the claim is made”.<sup>6</sup> It is, therefore, necessary to distinguish between “expert-based” and “expert-informed” decision-making, the latter referring to situations in which “all evidence is considered but not used by default as the sole basis for decision-making”.<sup>7</sup>

Within this framework, US policy-making has a long-standing tradition of relying on scientific advice, at both the legislative and governmental levels. In addition to the structural reasons for interest in this research topic as briefly summarised, contextual reasons can also be argued, particularly concerning the way in which the Biden administration has acknowledged spaces and mechanisms for opening up to scientific and technical expertise in its approach to decision-making.

## 2. The evidence-based approach as a structural and transversal method of decision-making for Biden administration

The most relevant aspect of Biden decision-making approach, considering the prominence given to it within the Biden administration’s programmes and initiatives, is undoubtedly the centrality of scientific advice and the

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<sup>3</sup> P. Carrozza, *Tecnica e politica: la necessaria complementarità*, in Grasso, G. (a cura di), *Il Governo tra tecnica e politica*, Napoli, 96, cited by G. Ragone, *Imparare dalla pandemia: saperi scientifici e processi di decisione politica*, in *Quaderni costituzionali*, 1, 2022, 76.

<sup>4</sup> P. Popelier, *The courts as regulatory watchdog. The procedural approach in the case law of the European Court of Human Rights*, in P. Popelier, A. Mazmanyán, W. Vandenbruwaene (eds.), *The role of Constitutional Courts in multilevel governance*, Intersentia, 2013, 267.

<sup>5</sup> Science Advice for Policy by European Academies, *Making sense of science for policy under conditions of complexity and uncertainty*, Evidence Review Report, 6, 2019, 22.

<sup>6</sup> *Ibidem*.

<sup>7</sup> *Ivi*, 23.

recognised role of experts. As the analysis of the main acts on the subject presented in this paper will show, what was previously defined as evidence-based policy making has taken on the nature of a structural method of political decision-making.

From this perspective, the approach taken by the Biden administration can be described as twofold. On one hand, a strong will to introduce a clear discontinuity with the Trump presidency appears to be present. At the same time, evidence reflects a desire to restore continuity with the traditional attitude of openness and attention to the role of experts that has traditionally characterised the US administration.

This finding emerged from the analysis of the first policy documents of the Biden administration, in which the evidence-based nature of government initiatives (programmes, actions, policies) increasingly becomes a constant target. As the following paragraph, which serves as a preliminary observation to the in-depth analysis of administration's actions outlined in this paper, explains, implementation of an evidence-based method of policy-making can qualify as a transversal approach across the various governmental sectors of action. However, it must be intended as a mainstreaming approach, which goes to characterising all actions and initiatives designed and taken by the Biden administration.

Particularly relevant to this discussion is the 'President's Memorandum on Restoring Trust in Government through Scientific Integrity and Evidence-Based Policymaking',<sup>8</sup> which clearly states that the policy of Biden administration is "to make evidence-based decisions guided by the best available science and data". Importantly, the evidence-based nature of public policies is expressly linked and considered to be functional to "the development and iterative improvement of sound policies, and to the delivery of equitable programs, across every area of government".<sup>9</sup> Three core ideas can be detected in the intertwining between policy and science: firstly, the guarantee of the scientific reliability of decisions made; secondly, the connection between the scientific reliability of governmental programmes and the equitable nature of the latter, especially in the social-welfare context; finally, the transversal nature of the evidence-based approach, which must characterise every sphere of government action.

Important to recall here also are two central commitments declared by the Biden administration within the framework of the Year of Evidence for Action Plan (April 2022, see *infra*) that would guide activity on evidence-based policy-making: a commitment to research integrity and a commitment to equity.

Thus, as this brief outlook has illustrated, one key target of Biden administration is to restore and enhance evidence-based policies; accordingly, scientific advice must play a structural role in the design and implementation of actions, programmes and policies. The political will to do so can be identified in a paradigmatic way in Biden's choice to assign the President's Science Advisor the status of Cabinet member, for the first time in the history of the US government. Through this action, a commitment to

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<sup>8</sup> President's Memorandum on Restoring Trust in Government through Scientific Integrity and Evidence-Based Policymaking, January 27, 2021.

<sup>9</sup> *Ibidem*.

evidence-based policy has been part of Biden's political programme from the beginning of his presidency. In a news release reported by *The Washington Post*, Biden declared that "science will always be at the forefront of my administration" and that scientific advice mechanisms and bodies "will ensure everything we do is grounded in science, facts, and the truth".<sup>10</sup>

Before analysing in detail the relevant actions of the Biden administration from an institutional perspective, two additional factors must be considered: the first is related to the function attributed to the tools of scientific advice; the second refers to the paradigm shift introduced with respect to the Trump administration's approach.

First, opening the decision-making process to the consideration of scientific input does not equate to replacing political discretion with scientific truth, as scientific advice is neither legally nor politically binding. It represents a procedural burden, from which no legal constraints derive with respect to the transformation of the information considered in political decision-making. Biden recalled the principle according to which the policy of his administration is to listen to the science,<sup>11</sup> thus focussing on the method more than on the outcomes of policy-making. This approach is consistent with results reported in the international scholarship on the issue, according to which the main function of scientific advice is to "provide knowledge that can help to provide evidence to the policymaking process and improve the quality for generating, selecting, assessing and evaluating policy options".<sup>12</sup> A second consideration, as mentioned previously, is the Biden administration's attempts to establish discontinuity with the Trump administration's approach to science, which was identified through the concept of post-truth populism. Post-truth populism identifies a "phenomenon in which scientific facts take a back seat to emotionally charge[d] populist rhetoric"; accordingly, objective facts become less important in shaping public opinion than political appeals to emotions and to "alternative facts".<sup>13</sup> In the article "Weathering the Storm",<sup>14</sup> a statement from the US National Academies of Science and Medicine (September 2020) is referred to in which – while Trump is not explicitly mentioned – the centrality of scientific integrity in policy-making is particularly highlighted. The statement stresses the standard according to which "policy making must be informed by the best available evidence without it being distorted, concealed or otherwise deliberately miscommunicated"; at the same time, it refers to finding the risk of the "(...) politicization of science, particularly the

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<sup>10</sup> Washington Post, Biden will elevate White House science office to Cabinet-level, 15 January 2021, <https://www.washingtonpost.com/science/2021/01/15/biden-lander-ostp/>.

<sup>11</sup> Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, 20 January 2021.

<sup>12</sup> Science Advice for Policy by European Academies, *Making sense of science for policy under conditions of complexity and uncertainty*, cit., 22.

<sup>13</sup> F. Fischer, *Post-Truth Populism and Scientific Expertise: Climate and Covid Policies from Trump to Biden*, in *International Review of Public Policy*, 4, 1, 2022, 2.

<sup>14</sup> "Weathering the Storm", published in Science in 2020 (<https://www.science.org/content/article/trump-has-shown-little-respect-us-science-so-why-are-some-parts-thriving>).

overriding of evidence and advice from public health officials and derision of government scientists, to be alarming”.<sup>15</sup>

As shown in the following section, one of the Biden administration’s goals is precisely to restore the idea of scientific integrity within the governmental structure and action. At the same time, the attitude towards scientific advice is not only reactive against Trump’s approach, but it is also proactive, characterised by a political programme grounded on the idea of converting the evidence-based method as one of the institutional pillars of Biden administration.

According to the Executive Order establishing the Council of Advisors on Science and Technology (PCAST, see below), the “policy of Federal administration is to make evidence-based decisions guided by the best available science and data”<sup>16</sup> and officials and employees “(...) shall seek from scientists, engineers and other experts the best available science and technology information and advice”.<sup>17</sup> With the ambition to promote a long-term relationship between scientific and technological development, on one hand, and political and administrative design, on the other, in the ‘Letter to the President’s Science Advisor and Director of PCAST’,<sup>18</sup> Biden declared the administration’s goal to refresh and reinvigorate the government’s science and technology strategy by assigning to the scientific consultative bodies the challenge of understanding and driving “how science and technology can best be applied to benefit Nation’s health, economic prosperity and security in decades that would follow”.<sup>19</sup>

More concretely, Biden addressed PCAST with five key science questions with the aim of soliciting recommendations to the administration on “the general strategies, specific actions, and new structures that the federal government should adopt to ensure that our nation can continue to harness the full power of science and technology”:

- What can we learn from the pandemic about what is possible – or what ought to be possible – to address the widest range of needs related to our public health?
- How can breakthroughs in science and technology create powerful new solutions to address climate change, improve health, and grow jobs, especially in communities left behind (equity)?
- How can the US ensure that it is the world leader in the technology and industries of the future that will be critical to our economic prosperity and national security, especially in competition with China?
- How can we guarantee that the fruits of science and technology are fully shared across America and among all Americans?
- How can we ensure the long-term health of science and technology in our nation?<sup>20</sup>

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<sup>15</sup> *Ibidem*.

<sup>16</sup> See also the Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking, 27 January 2021.

<sup>17</sup> Executive Order establishing the Council of Advisors on Science and Technology, January 2021.

<sup>18</sup> Letter to the President’s Science Advisor and Director of PCAST, 15 January 2021.

<sup>19</sup> *Ibidem*.

<sup>20</sup> *Ibidem*.

Worth highlighting is a fil rouge linking all the issues raised by Biden's 'Letter' in the form of a direct connection between the centrality of scientific and technological expertise within the governmental structure and the aim of promoting equality and equity in access to public services in all areas of governmental activity. Issues such as social inequities and racial and socioeconomic health disparities can be tackled also through the direct involvement of science and technology expertise, as well as through the promotion and safeguarding of scientific integrity within the government.<sup>21</sup> The fact that recommendations provided by scientific consultative bodies will not have a legally binding nature must be made clear, but those bodies can provide useful cognitive and knowledge-based elements, functional to a more aware and reliable exercise of political discretion in the selection of concrete tools to implement the objectives identified by the government.

In continuity with Obama's administration, an essential component in grounding governmental action on an evidence-based decision-making process is the safeguarding of scientific integrity in the interface between scientific advice and administration. A definition of scientific integrity can be derived from actions taken by Biden administration: it involves "ensuring that science is conducted, managed, communicated, and used in ways that preserve its accuracy and objectivity and protect it from suppression, manipulation, and inappropriate influence, including political interference".<sup>22</sup> This is concretely defined in the principle according to which "scientific findings should never be distorted or influenced by political considerations". Thus, "when scientific or technological information is considered in policy decisions, it should be subjected to well-established scientific processes, including peer review where feasible and appropriate, with appropriate protections for privacy".<sup>23</sup>

The reference to potential distortions or political influences indirectly points to previous experiences under the Trump administration's mandate, in which scientific evidence that did not support political goals was routinely suppressed or ignored, particularly in the field of environmental protection. At the same time, it confirms the direct linkage between safeguarding scientific integrity *vis a vis* its political exploitation, on one hand, and the "welfare of the Nation", on the other. When the former is not guaranteed effectively, and improper political interference occurs, the latter will be undermined; political exploitation of scientific knowledge also contributes to the growth of systemic inequities and injustices and violates "the trust that the public places in government to best serve its collective interests".<sup>24</sup> The 'President's Memorandum on Restoring Trust in Government' intervenes in the institutional structure of Biden administration, assigning to the Director of the Office of Science and Technology Policy (OSTP) the specific function of ensuring scientific integrity in the various fields of

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<sup>21</sup> See the President's Memorandum of restoring trust in government through scientific integrity and evidence-based policymaking.

<sup>22</sup> FACT SHEET: Biden-Harris Administration Launches Year of Evidence for Action to Fortify and Expand Evidence-Based Policymaking, 7 April 2022.

<sup>23</sup> Memorandum on Restoring Trust in Government.

<sup>24</sup> *Ivi.*

action<sup>25</sup> and calling all agencies to establish the Agency Scientific-Integrity Policies (sec. 3) and, only for agencies that fund, conduct or oversee scientific research, to designate an Agency Chief Science Officer to be responsible for – among other specific tasks – serving as the principal advisor to the head of the agency on scientific issues and ensuring that the agency’s research programmes are scientifically and technologically well-founded and conducted with integrity (sec. 6).

Particularly relevant is the establishment of an interagency Task Force on Scientific Integrity, which has been called on to “conduct a thorough review of the effectiveness of agency scientific-integrity policies developed since the issuance of the Presidential Memorandum of March 9, 2009” (sec. 2).

The retrospective goal is to assess “whether existing Federal scientific-integrity policies prevent improper political interference in the conduct of scientific research and the collection of scientific or technological data; prevent the suppression or distortion of scientific or technological findings, data, information, conclusions, or technical results; support scientists and researchers of all genders, races, ethnicities, and backgrounds; and advance the equitable delivery of the Federal Government’s programs” (sec. 2).<sup>26</sup> Additionally, on the basis of the results of this audit, the Task Force is called upon to propose effective practices, regarding *inter alia* the engagement of federal scientists with news media and social media and the protection of scientific independence during clearance and review, that avoid improper political interference in research or data collection.

### 3. The concrete implementation of the evidence-based approach: (dis)continuity and innovation

In terms of institutional action, different levels of implementation of evidence-based decision-making may be detected. In the following section, three areas of intervention are briefly analysed: the establishment of scientific consultative bodies, specific policy areas and tools (Social and Behavioural Sciences Subcommittee, SBS) and political and regulative strategies (Blueprint on AI).

Regarding the institutional dimension, a continuity in the appointment of traditional consultative scientific bodies can be detected. At the same time, from an examination of the concrete tasks assigned to those bodies, a significant change of pace can be immediately perceived in terms of attributed functions and recognised spaces for scientific input within government action.

The primary purpose of the OSTP<sup>27</sup> is to maximise the benefits of science and technology to advance health, prosperity, security,

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<sup>25</sup> According to the Memorandum, the Director “shall ensure the highest level of integrity in all aspects of executive branch involvement with scientific and technological processes”.

<sup>26</sup> *Ibidem*.

<sup>27</sup> It was established by the National Science and Technology Policy, Organization, and Priorities Act of 1976 to provide the President and others within the Executive Office of the President with advice on the scientific, engineering, and technological aspects of

environmental quality and justice for all Americans.<sup>28</sup> To comply with this goal, the Office provides advice to the President on all matters related to science and technology; it stewards the creation of unified strategies and policies and of effective, equitable programmes for science and technology in conjunction with departments and agencies across the federal government, including Congress; it engages with external partners, including industry, academia, philanthropic organisations, and civil society, as well as state, local, Tribal, national and territorial governments; and it works to ensure inclusion and integrity in all aspects of science and technology.<sup>29</sup>

Apart from its traditional and long-term tasks, at the time of its establishment, President Biden – as already analysed – charged this consultative body with the innovative and specific mission to assist the President’s Science Advisor (who is also the Director of the OSTP) in developing activities related to the promotion and guarantee of scientific integrity within the governmental institutional structure and related to the establishment of the ad hoc Task Force on Scientific Integrity. Moreover, within the OSTP’s framework is publication of the Blueprint for an AI Bill, which is intended as “a set of five principles and associated practices to help guide the design, use, and deployment of automated systems to protect the rights of the American public in the age of artificial intelligence”.<sup>30</sup>

Innovations in the method of appointment of traditional consultative scientific bodies include the promotion to Cabinet level of the President’s Science Advisor as noted previously, as well as assigning to the latter the function of imagining the future of science and technology in relation to some of the traditional goals of government (e.g. more equitable access to health care).

Furthermore, the appointment of the President’s Council of Advisors on Science and Technology (PCAST) has been characterised by the political will “to make evidence-based decisions guided by the best available science and data”.<sup>31</sup> Thus, functions traditionally associated with that consultative body will be implemented to achieve the goal of enhancing the evidence-based nature of the Biden administration’s policy-making processes.<sup>32</sup>

If the focus shifts towards specific tools adopted by Biden administration, the innovative scope of the approach becomes even more

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the economy, national security, health, foreign relations, the environment, and the technological recovery and use of resources, among other topics.

<sup>28</sup> Official website: <https://www.whitehouse.gov/ostp/>; see <https://www.whitehouse.gov/wp-content/uploads/2022/10/Blueprint-for-an-AI-Bill-of-Rights.pdf>.

<sup>29</sup> Ibidem.

<sup>30</sup> Official website: <https://www.whitehouse.gov/ostp/ai-bill-of-rights/what-is-the-blueprint-for-an-ai-bill-of-rights/>; see more in detail below.

<sup>31</sup> Official website: <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-presidents-council-of-advisors-on-science-and-technology/>.

<sup>32</sup> “The PCAST shall advise the President on matters involving policy affecting science, technology, and innovation, as well as on matters involving scientific and technological information that is needed to inform public policy relating to the economy, worker empowerment, education, energy, the environment, public health, national and homeland security, racial equity, and other topics”, Executive Order on the President’s Council of Advisors on Science and Technology, 27 January 2021, sec. 3.

evident. In fact, the traditional structure of scientific advice at the governmental level (OSTP, PCAST) is supplemented by ad hoc initiatives, both at the institutional and policy level. One of the most relevant examples is the re-chartering of the Social and Behavioural Sciences Subcommittee (SBS, April 2022), which was originally established during Obama administration and thereafter dismissed by Trump.<sup>33</sup> According to the charter of the SBS (April 2022), the re-established SBS is intended as one of the tools set forth by the government to fulfil the task of prioritising and expanding the scope of evidence-based methods in support of federal policy-making, particularly in light of advancing equity. The main function of the SBS is to provide executive agencies and departments with “a forum for discussing the use of social and behavioural science methods”, by acknowledging “these disciplines’ unique role in describing, understanding, and addressing societal challenges and assessing and evaluating initiatives, programs, and policies promulgated by the Federal government”. The SBS has identified five policy areas that reflect the administration’s priorities;<sup>34</sup> a mid-term goal of the Committee is the publication of a Blueprint for the use of social and behavioural science research to advance evidence-based policy-making by April 2023.

More targeted initiatives, where the role of scientific consultative bodies is pivotal, are the Blueprint for an AI Bill of Rights and the Equity Action Plan (2022), both published in the framework of the OSTP. The former, mentioned previously, may play a critical role in defining the future US regulatory approach to artificial intelligence. While an in-depth analysis of the Blueprint is not possible here, one relevant point worth noting is that the AI strategy is explicitly linked to the goal of rooting out inequity, embedding fairness in decision-making processes and affirmatively advancing civil rights, equal opportunity and racial justice in America.<sup>35</sup> Accordingly, the OSTP identified five principles that should guide the design, use and deployment of automated systems to protect the American public in the age of artificial intelligence: safe and effective systems; algorithmic discrimination protection; data privacy; notice and explanation; and human alternatives, consideration and fall-back.

Through the Equity Action Plan,<sup>36</sup> the OSTP provides concrete plans to fulfil its commitment “to advancing both equity *in science* and technology, and science and technology *for equity*”. The broader achievement exists in promoting the idea of ‘reflective science’, intended as the building of a professional scientific community that reflects the full diversity of American

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<sup>33</sup> Charter of the Subcommittee on Social and Behavioural Sciences of the Committee on Science National Science and Technology Council, April 2022 ([https://www.whitehouse.gov/wp-content/uploads/2022/06/06-2022-SBS\\_Recharter.pdf](https://www.whitehouse.gov/wp-content/uploads/2022/06/06-2022-SBS_Recharter.pdf)).

<sup>34</sup> They are as follows: Accessibility of Digital Infrastructure and Services; 2. Communicating Hazard Information and Other Types of Uncertainty; 3. Decarbonization and Justice; 4. Good Jobs; and 5. Safely Reducing Criminal Justice System Interactions, Improving Rehabilitation during Incarceration, and Enhancing Re-entry.

<sup>35</sup> <https://www.whitehouse.gov/ostp/ai-bill-of-rights/>.

<sup>36</sup> <https://www.whitehouse.gov/ostp/news-updates/2022/04/14/the-white-house-office-of-science-and-technology-equity-action-plan/>.

society, as well as the role of science and technology in addressing societal inequalities, and in making the achievements of that community and their applications available for all people.<sup>37</sup>

Concretely, the Equity Action Plan recommends two main actions: “developing OSTP’s capacity to advance equitable science and technology policy” and “employing inclusive engagement to impact policy development”.

A final example of the innovative scope of Biden’s approach to policy is the ground-breaking stance, both at the national and comparative levels, of the Biden administration’s initiative to establish the Year of Evidence for Action (April 2022), the first-ever White House Summit on evidence for action co-hosted by the OSTP and the Office of Management and Budget (OMB). The primary objectives identified for this initiative were to share leading practices from federal agencies to generate and use research-backed knowledge to advance better, more equitable outcomes for all of Americans; to strengthen and develop new strategies and structures to promote consistent evidence-based decision-making inside the federal government; and to increase connection and collaboration among researchers, knowledge producers and decision-makers inside and outside the federal government.<sup>38</sup>

According to the Year of Evidence presentation, two central commitments (as mentioned previously) will guide the administration’s work on evidence-based policy-making – a commitment to scientific integrity and a commitment to equity – thus recalling the ultimate goals that have been linked to the enhancement of the evidence-based method of political decision-making. The direct connection that the Fact Sheet identifies between safeguarding scientific integrity within governmental activities and the nation’s well-being must be underlined. Specifically, the Fact Sheet notes that “making policies based on best-available research and data is critical to keeping American public safe, healthy, informed, economically prosperous”,<sup>39</sup> as data show that people generally benefit when evidence informs governmental decisions. The commitment to equity will also benefit from an evidence-based approach, which confirms the nature of its mainstreaming and cross-cutting method of policy-making.

The contribution of scientific integrity is specifically linked to the objective “to evaluate what works, for whom, and under what circumstances, so that we know that Federal policies are making good on their promises to the American public”. In order to be fruitful and reliable, this intertwining must be designed to involve “a wide array of scientific techniques, from formal evaluations and statistical analyses, to interview-based studies co-created with local communities, to research that includes, among many others”. Moreover, “it also should ensure that communities, practitioners, civil servants, and policy leaders are working together throughout the evidence lifecycle”.<sup>40</sup>

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<sup>37</sup> [https://www.whitehouse.gov/wp-content/uploads/2022/04/04-2022-EO13985\\_OSTP\\_EquityAction-Plan\\_FINAL.pdf](https://www.whitehouse.gov/wp-content/uploads/2022/04/04-2022-EO13985_OSTP_EquityAction-Plan_FINAL.pdf).

<sup>38</sup> Biden-Harris Administration Launches Year of Evidence for Action to Fortify and Expand Evidence-Based Policymaking, Fact sheet, 7 April 2022.

<sup>39</sup> *Ibidem*.

<sup>40</sup> *Ibidem*.

#### 4. Conclusive remarks: the evidence-based approach as the way forward for more reliable and equitable political strategies

The activation of scientific advice mechanisms within the governmental structure represents a constant within the various administrations that have succeeded one another over time. Consultative bodies with a science and technology expertise, such as the OSTP and PCAST, or functions such the President's Science Advisor, have always existed within the federal administration. What may shift in line with a change in administration is the role assigned to these entities, both at the formal and substantial level, and the weight and relevance of their participation in and their capacity to contribute to policy development in different areas of governmental competence. From that perspective, Biden administration since its inception has declared the explicit political determination to ensure the evidence-based nature of its decision-making mechanisms. Thus, the role of science and technology advice is regaining centrality within the federal government, after a period – that is, Trump's term – during which expert advice risked becoming politicised and the context within which the scientific advisory bodies operated was conditioned upon what has been termed 'post-truth' populism.

The analysis revealed a clear discontinuity with Trump's, reflecting a commitment to safeguarding scientific integrity within the relationship between politics and science and technology, which Biden has identified as essential to promoting people's trust in the government, on one hand, and to ensuring that policies and actions are reasonable, feasible and equitable, on the other. Thus, the policy of the federal administration must not only ensure that decisions are made based on evidence, guided by the best available science and technology knowledge, but also must guarantee that scientific activity is conducted, managed, communicated and used in ways that preserve accuracy and objectivity. From that perspective, of the utmost relevance is providing institutional and human tools able to protect science from manipulation, suppression and inappropriate influence, particularly political interference.

As already highlighted, the evidence-based approach represents an essential method of policy-making. This goal requires ad hoc initiatives and reforms at the institutional level to equip different administrations and agencies with adequate and effective tools; furthermore, it seems intended as a mainstreaming method within the administration as a whole, thus going to characterising decision-making processes of all areas of governmental activity.

At the same time, the limits of this approach have been clarified, as the idea of evidence-based policies cannot entail the duty for administrators to automatically translate scientific advice into political decisions; the concrete definition of the latter must remain within the discretionary power of competent authorities, which is enhanced by, not substituted for, input from scientific consultative bodies. A relevant distinction was proposed within the Italian legal scholarship between "science-based" decisions, which are grounded (also) on science and technology, and "science-driven" decisions, which are determined by scientific expertise that entered the decision-making process.

An additional key element that characterises Biden’s approach to scientific advice mechanisms is the direct correlation that develops from official acts between the strengthening of evidence-based decision-making processes, as well as the strengthening of scientific integrity within federal administration, and the trustworthiness and reliability of policies and strategies, as well as the general trust of people in the government. In Biden administration’s view, the evidence-based method of policy-making represents a condition for designing more equitable and fair decisions, especially in areas such as public health, education and employment (see e.g. *The Year of Evidence*).

In the medium to long term, Biden administration may serve as a laboratory in which innovative solutions of partnership and integration between politics, law, science and technology will be possibly tested in their effective implementation and impact and not only in their theoretical design.

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