



## Academies and Knowledge Management

**Jüri Engelbrecht**

Trustee, World Academy of Art and Science  
Fellow, Estonian Academy of Sciences

Science academies have several roles to play in contemporary information-rich society. The most important roles are: (i) to promote science and scholarship; (ii) to provide advice and expertise; (iii) to promote scientific understanding. The roles (ii) and (iii) are clearly related to multilateral activities because of the links to partners but (i) have a dual structure: partly purely scientific, partly multilateral related to societal needs. On the one hand, academies as well as academia should think in advance fostering research for broadening knowledge; on the other hand, there are so many challenges and societal issues like Sustainable Development Goals that need to be analysed, explained, and addressed. In addition, academies develop the trust in science and ethical behaviour needed for all scientific activities. These values are acknowledged by policy-makers: for example, the EU asked ALLEA to formulate the principles of Scientific Integrity that must be followed in all the EU-funded activities.

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The activities of academies of science are characterized by the basic principles of science itself: Only scientific research based on transparent methodologies, and scientific arguments based on empirical facts and logical analysis bring us closer to the truth, while reflection, imagination, and creativity tell us where and how to explore further. In policy, political choices and joint visions are decided by voting and often compromises are needed, which is something that cannot happen in science. Without judgment, this is the difference between a scientist and a policy-maker, and it explains why the special advisory status of science depends on our commitment to impartial expertise. The strength of research relies on peer-review—all statements, advice, and ideas should be scientifically proved and widely accepted in the scientific community. This does not mean that everything in research goes smoothly—the discussions about new ideas and possible changes in paradigms can be taken as driving forces for new knowledge.

Academies unite scientists and scholars from various disciplines and therefore are the best to analyse the complexity of the world in all its shades and networks. In other words,

A. Einstein said that the Temple of Science is a multi-faceted building. Indeed, in complex systems, there are many interacting constituents and the interactions lead to new qualities that might be unpredictable. In this context, interdisciplinarity plays an important role in studying complex systems.

The present COVID-19 crisis has demonstrated the vulnerability of the world. WAAS has indicated the need for future research in a short summary (WAAS, 2020). The role of academies in times of crisis has been analysed by the Academy of Sciences of Turin (2020) together with ALLEA. The academies and their meta-organizations like ISC, IAP, ALLEA, etc. have formulated their missions to foster their ideas (see Engelbrecht, Djurovic, and Reuter, 2020).

#### *Author Contact Information*

*Email:* [je@ioc.ee](mailto:je@ioc.ee)

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