

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
New Worlds - Non-Traditional Space Education and Outreach (7)Author: Mr. Joachim Reinhold
GermanyLESSONS FROM THE GOLDEN AGE AS AN EDUCATIONAL CATALYST FOR THE
ARAB-ISLAMIC SPACE ENDEAVOUR AND BEYOND**Abstract**

We propose to think outside-the-box, learn from the past to overcome the challenges of tomorrow. While universities and space-related institutions exist worldwide, they mainly represent the Western approach towards higher education and science – a concept that works but lacks Arab-Islamic identity as it draws a distinct line between the secular and religious worlds. However, without this division between faith and science, great places of discovery and learning blossomed: Islamic Madrasahs and Bayt Al-Hikma, the House of Wisdom. Long before the Renaissance, these institutions introduced the world to think tanks, universities and most of all, the scientific method.

Today's Arab-Islamic region embraces the legacy of its Golden Age, entering a new age of teaching, learning and discovery. With the Foundation of the Arab Space Cooperation Group in 2019 and the UAE's Al Amal (Hope) probe having reached Mars in 2021, the first step towards Mars 2117 (a human settlement on the Red Planet) got accomplished. Both symbolic impacts will catalyse a tremendous demand in attracting future generations of scientists and space workers for the fast-growing space sector, the economy of the future, and as such, a potential trillion-dollar market.

We will discuss how the Arab-Islamic scientific and educational heritage will decrease current dependencies on oil and gas, balance fluctuations in tourism and mitigate the effects of global crises (e.g. pandemic- and climate-related challenges). What accomplishments of the Golden Age can be applied to today's Arab-Islamic world to educate the space-interested youth, attract competent scientists, and create a skilled space workforce?

On a global scale, current educational programs have not brought enough talent into the space sector to meet future human resources demands. Therefore, we will discuss how certain Golden Age elements can re-shape our educational approach even beyond the Arab-Islamic region to solve this dilemma. As a result, a knowledge-driven economy through traditional and digital innovation gets created along the way, incorporating accepted Sustainable Development Goals and a space industry supporting infrastructure.

Please note: This lecture truly reflects the heart of this year's IAC motto. It elaborates on visions discussed at IAC-18 and supports the ideas behind the Arab Space Cooperation Group's foundation and the UAE's space endeavour.

We have submitted an extended version of this lecture as a proposal for a Special Session, too.