GOAL 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE

Sustainable Development Goal (SDG) 9 aims to build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation. The Hashemite University (HU) is committed to contributing to this goal through its teaching, research, and innovation activities.

Teaching

HU offers a variety of undergraduate and graduate programs in engineering, science, and technology, which prepare students for careers in industry and innovation. The university also offers a number of courses on sustainable development, including a new university elective course (Creativity and Social Entrepreneurship – Course number 1914041129) to teach tomorrow's leaders the multi-disciplinary challenges of sustainable development.

Research

HU has a strong research focus on sustainable development, with a particular emphasis on renewable energy, water efficiency, and waste management. The university has a number of research centers and institutes that are working on these and other related topics. Additionally, the university is continuously supportting and encouraging the faculty members for applying and seeking funds from local and global partners from industry and commerce. In fact, the research income from industry and commerce during the past two years was about $1,445,415.44. More specifically, it was about $250,707.61 in STEM, $1,104,102.47 in medicine, and $90,605.36 in Arts, Humanities and Social Sciences.

Innovation

HU is committed to fostering innovation and entrepreneurship among its students and faculty. For example, the university has a Pharmacy Management and Pharmaceutical Care Innovation Centre (PM&PCIC), which connects pharmacy academic research with the pharmaceutical care practice. It is a unique center in Jordan that lead to specialties-oriented training and continuous development in pharmacy management related disciplines. In addition to local community development, the center also is perceived as a facilitator for Knowledge Transfer Partnership (KTP) between the Hashemite University – Pharmacy School and strategic local and international partners. Moreover, the university has an Innovation and Entrepreneurial Projects Center that provides support services for potential entrepreneurs, companies, and those who have an idea to start a business. HU also has a number of spin-off companies that have been established by its faculty and students. . In fact, the university currently has more than 16 spin-offs which created a large number of jobs, especially for its graduated and newly graduated students. In Figure 1, we provide an example of a spin-off that the university supported called ION (https://ion.jo). ION is considered the first electric vehicle charging network in the country

of Jordan. It enables the EV (Electric Vehicles) industry and promotes Zero Emission technology in Jordan.

Figure 1 ION Company

Additionally, In Figure 2, we provide anpther example of a university spin-off that is called Algocopoeia (https://www.algocopoeia.com/). In Algocopoeia, the founders are trying to create a pharmaceutical encyclopedia of digitally designed extended medical algorithms, based on already formed and authorized guidelines, directed toward pharmacists.

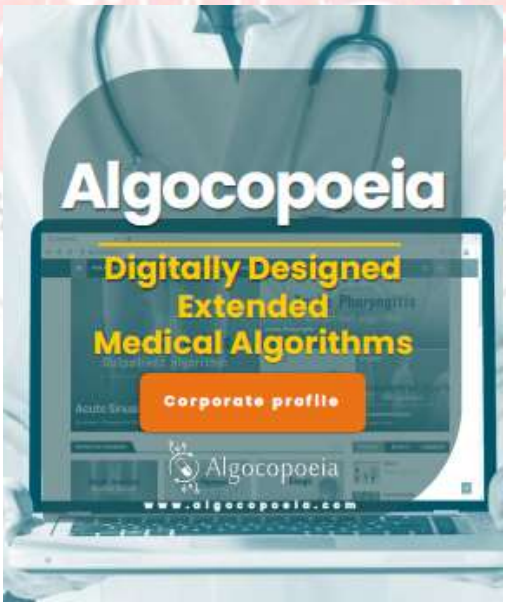

Figure 2 Algocopoeia company

Below are some specific and additional examples of HU's contributions to SDG 9:

- Reduction in the the number of administrative staff compared to the number of academic staff. For example, currently, the university has 1665 employees out of which 825 employees are academic (310 in STEM, 213 in medicine, and 302 in Arts, Humanities and Social Sciences).
- Continous Development of Renewable energy solar farms/projects that helped in reducing the university electricity monthly bill to zero. Additionally, the solar farms are currently providing the necessary support for the ongoing research and studies in the fields of renewable energy at the university.
- Development of new water-efficient irrigation systems. HU researchers have developed new irrigation systems that use less water than traditional systems. These systems are being used by farmers in Jordan to improve their water efficiency and productivity.
- Development of new waste management technologies. HU researchers have developed new technologies for converting waste into energy and other valuable products. These technologies are helping to reduce the amount of waste that is sent to landfills and to generate new sources of renewable energy.

Last but not least, HU is committed to continuing to contribute to SDG 9 through its teaching, research, and innovation activities. The university is playing an important role in helping Jordan to build a more sustainable and inclusive economy.