



Sustainable Development Goals

Individual Report on SDG 9 - INDUSTRY, INNOVATION AND INFRASTRUCTURE

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Aktau 2023

SUSTAINABLE DEVELOPMENT GOALS

INDIVIDUAL REPORT

University spin offs

University spin-offs play a vital role in driving innovation and economic growth by translating academic research into tangible real-world applications and products. Thus, Yessenov University focuses on the development of research and innovations. In its turn, the University has developed 21 spin offs.

9.4 Research income from industry and commerce

Numbers:

9.4.1 - Research income from industry and commerce: Total - **720 936,8** US Dollars

9.4.1.1 - Research income from industry and commerce by subject area: STEM - 462608 US Dollars

9.4.1.3 - Research income from industry and commerce by subject area: Arts & Humanities / Social Sciences - 258328,8 US Dollars

9.4.3 - Number of employees - 652

9.4.2.4 - Number of academic staff - 429

9.4.2.1 - Number of academic staff by subject area: STEM - 122

9.4.2.3 - Number of academic staff by subject area: Arts & Humanities / Social Sciences - 151

No.	Information
1	<p>Startup name: 4D - Galaxy</p> <p>Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Education</p> <p>URL: https://bl.yu.edu.kz/ru/ccp-achievements/4d-galaktika/</p> <p>Description: <i>To develop the education sector in an interesting and effective way by creating an application with AR services for children and teenagers. This product increases students' desire and interest in education, so this product is very important for education.</i></p> <p><i>Provides interesting and simple information</i></p>

	<p><i>Animation booklet</i> <i>Anonymous (QR code), can display additional information</i> <i>Effective in the education system</i> <i>Project budget: 1,000,000 tenge</i> <i>Achievements:</i> <i>The project has copyright and works on the market.</i> <i>Finalist of the competition “Zhastar synergy 2019”</i> <i>Winner of the startup competition within the IT forum RIFMO-2019.</i> <i>Won 200,000 tenge</i> <i>Authors: Kaliev Kazbek, Baytanatkyzy Kyzgaldak, students of the Faculty of Engineering and Pedagogy</i></p>
2	<p>Startup name: Ling+ Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Education URL: ... Description: All platforms must have a mobile version, through this program you can learn +360 words for 1 word per day, and not just words, phrases, sentences and translations</p> <p>Ling plus plans: – Add new words to the database – Development of language learning methods – Creating games for language learning – Advertising</p> <p>Project budget: 650,000 tenge Achievements: Finalist of the competition "Jastar sinergiiasy" Winner of the “Best Startup 2018” competition Winner of the competition “Jas kasipker 2020” Authors: Asan Salamatov – Development Director Sagynov Bagdaulet – web developer Duysenov Ardak – sales manager</p>
3	<p>Startup name: Fruit chips Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): food Research URL: ...</p>

	<p>Description: The goal of the project is to create a healthy lifestyle among the population by producing fruit chips that are beneficial to human health according to special recipes. Chips made from these fruits are thin, dried and crispy. In fact, potato chips are one of the healthiest foods and fruit chips are good for human health. Fruit chips are a natural, healthy and ready-to-eat food for children and adults. Unlike traditional potato chips, fruit chips do not contain dyes or carcinogens that are created during frying. Project budget: 600,000 tenge</p> <p>Achievements: Participant in the finals of the competition “Best Startup 2019” Winner of the competition at the RIFMO 2019 forum Won 300,000 tenge. Finalist of the “Startup Mangystau” competition in 2020. The author of the project is Aylara Aitbaeva, a student at the Faculty of Business and Law.</p>
4	<p>Startup name: Smart stick Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Setting and Infrastructure URL: ...https://bl.yu.edu.kz/ru/ccp-achievements/umnaya-trost/</p> <p>Description: The goal of the project is to reduce the problems of people with disabilities, produce and sell useful products. The cane's ultrasound detects obstacles up to 400 meters in front of a person. Inside the block on the front of the smart wand is an Arduino device that operates through this signal. The GPS module inside the Arduino also shows the user's location to relatives on a map. If a blind person is in a bad situation, he/she can call his/her relatives on a specially set phone number through the SOS mechanism on the GPS map. Project budget: 350,000 tenge Achievements: Winner of the 2019 KazEnergy innovative project competition Winner of the international competition of social projects TOM-Aktau: Makeathon in 2018.</p>

	<p>Finalist of the republican competition “Startup Bolashak-Menin Armanym” Documents have been submitted for the acquisition of a Patent for the project The authors of the project are Mukhanbetov Bekberdi, Kuanova Ainur, students of the Faculty of Engineering</p>
5	<p>Startup name: Volunteer Club Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Education URL: https://bl.yu.edu.kz/ru/ccp-achievements/klub-volonterov/ Description: The goal of the project is to improve the quality of volunteer centers in the Mangystau region and attract young people to volunteer activities through comprehensive support and resource support. This project will be implemented in three main stages: Stage 1-preparation: – creation of material, technical and financial conditions for the work of the association of volunteers”; – providing specialists with the opportunity to choose a thematic plan, program, tools, methods and forms of working with volunteers; – study the organization of the volunteer movement in the institution; – training of volunteers. Stage 2 – diagnosis and search: – practical implementation of the project; – monitoring the level of development of the volunteer movement; – adjustment of the program and thematic plan; – involvement of volunteers in the daily special activities of the institution; – search for projects, innovative programs for organizing the work of volunteer associations; Stage 3 – final: – monitoring the progress of volunteers and the level of qualifications of specialists; – analysis of work with a group of volunteers; – To familiarize the center’s specialists with the results of the work of the volunteer association. Project budget: 250,000 tenge. Achievements: Winner of the social projects competition organized by the public foundation “Zhastar Zhetistikteri” in 2019;</p>

	<p>Received 200,000 tenge from Tengizchevroil. The author of the project is Chygyrbaeva Kurbanay, a master's student at the Faculty of Engineering.</p>
6	<p>Startup name: "Toys and pillows from tobacco" Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Waste URL: https://bl.yu.edu.kz/ru/news/ Description: "Toys and pillows from tobacco" project (Gabit Nursultan, Sabitova Gulim, Yesimov Bagdaulet, Toktamysova Lazzat, Turkpenbay Muslim), "Engineering" faculty;</p>
7	<p>Startup name: ECOMangystau Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Waste URL: https://bl.yu.edu.kz/ru/news/ Description: placement of collection centers for recycling of paper and plastic waste in Mangistau region Eco-friendly startup, founded in 2020 by Ualiev Nurbek saved more than 800 trees, and helped power more than 70 homes thus far. In addition to browser extension, the startup offers environmental accounting services that help businesses track their own carbon emissions.</p>
8	<p>Startup name: Eikswerd Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Waste URL: https://bl.yu.edu.kz/ru/news/ Description: Striving for sustainability in our cities is a very important step on the way to a better future. Eiksverd believes that we can use urban roofs in this way to contribute to the long-term sustainability of the city. The startup encourages us to rethink the use of our roofs and turn them into sources of fresh air and green energy. It installs solar panels, builds rooftop gardens and green walls, returning the power of nature to our man-made environment so that we can optimize our resources and improve the quality of our lives.</p>
9	<p>Startup name: SSAKO Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Waste</p>

	<p>URL:https://bl.yu.edu.kz/ru/news/</p> <p>Description: What does artificial intelligence have to do with my work? Well, thanks to SAKO, it can help us to work. SSAKOo's mission is to use artificial intelligence technology to revolutionize the waste recycling industry so that future generations can live in a cleaner world. The company has developed computer vision technology based on artificial intelligence, which allows machines to detect and recognize objects. With the help of algorithms, robots can sort waste much more efficiently than humans, and they can take over these mundane, potentially dangerous and repetitive tasks from us. Sadako technology changes the rules of the game, and does not limit its possible application.</p>
10	<p>Startup name: Help</p> <p>Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Energy and Climate change</p> <p>URL:https://bl.yu.edu.kz/ru/news/</p> <p>Description:</p> <p>The activity of the project is aimed at the preservation of green mass, we fully stood up for the protection of green areas in the city, stopped the mass felling of trees, entered into a dialogue with the local government. Then we took control of watering the seedlings, and when we realized that there was not enough water, we started cleaning the springs that fill the reservoirs. After that, we started planting trees, 1500 trees of 28 species were planted in Pobedy Park. Now we have 170 eco-activists in our team, each of whom helps in general.</p>
11	<p>Startup name: SO PACKY</p> <p>Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Waste</p> <p>URL: https://yu.edu.kz/kaspij-k%d3%99sipkerlik-ortaly%d2%93y/</p> <p>Description:</p> <p>The main activity of my project is the production of starch biopacks, which are an ecological alternative to polyethylene bags.</p> <p>Part of the profit will be allocated to the cleaning of unauthorized landfills, planting trees, and if possible, we will help to take care of the planted trees. Our entrepreneurial work also solves many social problems. Thus, on our base, people with disabilities are trained, where they receive an additional production specialty.</p>
12	<p>Startup name: ECO Net</p> <p>Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): EC</p>

	<p>URL: https://yu.edu.kz/kaspij-k%d3%99sipkerlik-ortaly%d2%93y/</p> <p>Description: ECO Net is an organization that ensures environmental friendliness and sustainable development in business processes. The activities are aimed at reducing the waste generated, maximizing their disposal, changing the culture of consumption, creating environmental awareness among the population, and reducing the carbon footprint of companies and people. We want to actively develop the existing Green School project, which gives the younger generation the opportunity to become more eco-conscious. Now this project is very small and we are just trying to develop it. We need active help from the state and companies that operate in Kazakhstan.</p>
13	<p>Startup name: URPAQ</p> <p>Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): EC</p> <p>URL: https://yu.edu.kz/kaspij-k%d3%99sipkerlik-ortaly%d2%93y/</p> <p>Description: URPAQ - production of sustainable eco-leather from coffee grounds. The technology used by the startup makes it possible to create artificial leather from coffee grounds, while saving water and reducing CO2 emissions by 2.5 times. Thus, specialists can turn one cup of coffee into a full-fledged cardholder that is resistant to moisture and wear. Thanks to the program, the startup achieved MVP status and received 200,000 tenge.</p>
14	<p>Startup name: Geo-ecology</p> <p>Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Water</p> <p>URL: https://yu.edu.kz/kaspij-k%d3%99sipkerlik-ortaly%d2%93y/</p> <p>Description: STARTUP Geo-ecology, which helps solve 2 problems at once. Firstly, restore the biodiversity of water bodies, clean the ecosystem and guarantee the sanitary safety of water bodies. The startup turned out to be the most promising and has already been tested in the Caspian Sea. Geo-ecology systems allow you to restore the ecosystem of even the most polluted reservoir within a year. The startup received 600,000 tenge and an article in the professional publication Business Digital for first place at DemoDay.</p>
15	<p>Startup name: 0 PLASTIC</p> <p>Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Waste</p> <p>URL: https://yu.edu.kz/kaspij-k%d3%99sipkerlik-ortaly%d2%93y/</p> <p>Description: 0 PLASTIC - production of furniture, interior items and useful products from plastic waste. Any resident of Almaty can bring sorted plastic to Plastic Hara Hura, recycle</p>

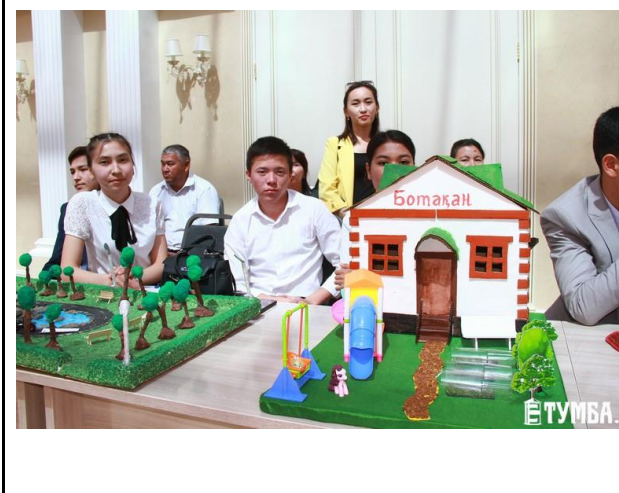
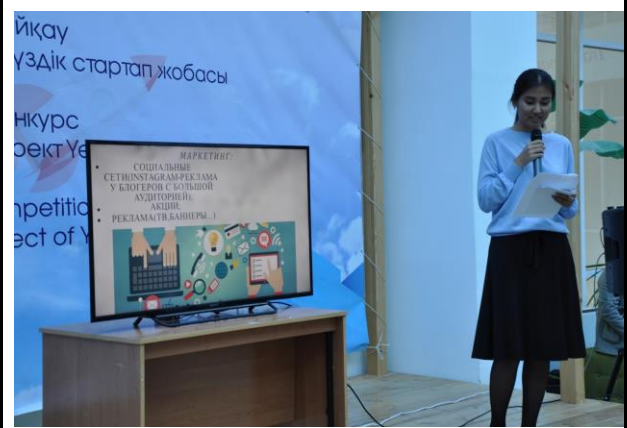
	<p>it and order a piece of furniture or a piece of art for themselves. The startup team also conducts creative master classes and sells finished products made from recycled plastic. The startup took second place with a cash prize of 400,000 tenge.</p>
16	<p>Startup name: Green office Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): EC URL: https://yu.edu.kz/kaspij-k%d3%99sipkerlik-ortaly%d2%93y/ Description: The concept of a “Green Office” is broad: it includes not only environmental, but also social impact - the space is described in the context of its impact on the health and productivity of the people who work in it. Our representatives in many cities of Kazakhstan successfully organize training, export and environmental events.</p>
17	<p>Startup name: CLEAN WATER Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Waste URL: https://yu.edu.kz/kaspij-k%d3%99sipkerlik-ortaly%d2%93y/ Description: CLEAN WATER - A sea water desalination device was created for desalination of the Caspian Sea water, which was created by the students of the university as a research project and for the use of university landscaping. Currently, a technical prototype of the project has been created and put into practice at the university. The project won state funding.</p>
18	<p>Startup name: BOTTLE Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Waste URL: https://yu.edu.kz/kaspij-k%d3%99sipkerlik-ortaly%d2%93y/ Description: The bottle will ultimately reduce the production of single-use plastic waste that ends up in our landfills and in our oceans. The new bottle should produce the equivalent of 15 bottles of sparkling water and can be consumed while at work or in the comfort of your home. Consumers will be able to refill their CO2 tanks using a cylinder that can be found in many local grocery or home goods stores.</p>
19	<p>Startup name: Enernet KZ Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): EC URL: https://yu.edu.kz/kaspij-k%d3%99sipkerlik-ortaly%d2%93y/ Description: Green energy startup ENERNET KZ specializes in building micro-grids (an independent energy system that serves a specific, small area). Micro-grids can be made up of any combination of renewable energy, such as wind parks or solar, so Enernet focuses on finding what works with an area's geographic makeup. The</p>

	company focuses on underserved markets to offer a reliable, affordable form of energy. The majority of their grids, thus far, are in rural communities and islands.
20	<p>Startup name: MANG Farm</p> <p>Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): SI</p> <p>URL: https://yu.edu.kz/kaspjy-k%27%99sipkerlik-ortaly%27%93y/</p> <p>Description: MANG Farm is a farm-to-business startup that generates its revenue mainly through commissions. With over 100 farmers in their network in Mangystau regional., MANG Farm works to gather products that they can then sell to local farms and businesses (the closer, the better) in order to keep up a product’s longevity. Their zero-waste practices also make them a sustainable company that’s looking toward the future.</p>
21	<p>Startup name: EL DALA</p> <p>Startup area in UI Greenmetric questionnaire (SI, EC, WS, WR, TR, ED): Waste</p> <p>URL: https://yu.edu.kz/kaspjy-k%27%99sipkerlik-ortaly%27%93y/</p> <p>Description: EL DALA - Camel farming project. Bringing together camel farming farmers in Mangistau region, preparing and presenting camel products to the people: milk, chubat, meat, skin products. Currently, 10 different dishes are prepared from camel's milk, 5 different dishes from meat, and woolen blankets are handed over to entrepreneurs who make beds. 10 million tenge were invested in starting the project. has been working on the market for more than 2 years now.</p>











Newsletter 1:

On May 12, 2023, Yessenov university hosted The Opening Ceremony of the Huawei ICT Academy with the participation of representatives of both parties, the leading global supplier of ICT infrastructure and intelligent devices, the Transnational Corporation “Huawei Technologies Co Ltd” and one of the leading universities in Kazakhstan, Yessenov university.

ICT Academy provides students with a free opportunity to gain a certain level of knowledge and develop practical skills in IT technologies, there is an opportunity to certify the best course students. In the future, it is planned to conduct internships for talented and excellent students of the Academy on the basis of Huawei's headquarters in Almaty and in the branches of partner companies.



Newsletter 2:

On May 14-15, the II Republican student festival “YESSENOV FEST-2022 ” was held. This year, 40 applications were received for the Republican startup competition “Jas Kasipker-2022”, aimed at developing the entrepreneurial activity of college graduates and 11th grade students, held within the framework of the traditional festival “Yessenov Fest 2022”.

A jury of external business coaches and experts evaluated 10 projects that reached the final.



Newsletter 3:

Yessenov University hosted an International Science Symposium and the Association of research centers and state universities of the Caspian countries.

At the meeting, seven speakers made presentations on the topics of water desalination, urbanization and science and industry.

Scientists, researchers, academics, and experts in various fields of science came together to present their research findings, discuss emerging trends, exchange ideas, and collaborate on scientific endeavors. It provided a platform for the dissemination of scientific knowledge, fostering intellectual discourse, and promoting advancements in various scientific disciplines. After the report, breakout sessions were held on five different topics.



