2022 Programme Schedule

"International Conference on Trends & Innovations In Management, Engineering, Science & Humanities"

(ICTIMESH-2022) DUBAI, UAE, December 19-22, 2022

Venue: Zayed University Convention Centre, Dubai, UAE.

Google Meet Link: https://meet.google.com/koi-ergo-fhm?authuser=0

Day 1: Monday 19th December, 2022

09:00-10:05 **Registration**

10:05-10:15 **Inauguration & Welcome Address**

Session I

Session Chair(s): Dr. Sharon Yalov-Handzel

10:15-10:30 **Expert talk by Dr. Sharon Yalov-Handzel on An Algorithm for Psychological Treatment of an Intelligent Agent**

S. No	Time	Paper ID	Presenter	Title of the Paper
1.	10:30-10:40	PD7708	Dr. Muthukumarasamy Govindarajan	Classification of Imbalanced Data using Heterogeneous Ensemble Model
2.	10:40-10:50	PD4212	Prof. Zied Hajej	Stochastic Production, Maintenance, and Quality Policy for Unreliable Production Systems under Service Level Constraint
3.	10:50-11:00	PD3114	Dr. Miri Krisi	External Factors and their Effect on the Learning of English as a Foreign Language among Students with Visual Impairments
4.	11:00-11:10	PD8386	Prof. Mohamad Khusaini and Mr. Abdul Manap Pulungan	Impact of Domestic and Global Factors on Indonesian Export Between 1990 and 2020: An Error Correction Model
5.	11:10-11:20	PD8724	Prof. Eli Cohen	Can Wineries in the Desert Attract Visitors? Assessing the Preferences of Wine Tourists
6.	11:20-11:30	PD1926	Prof. Menachem Luria	Top Ten Reasons for the Necessity of Global Adaptation to Climate Change
7.	11:30-11:50			**Tea Break**
8.	11:50-12:00	PD4037	Dr. Shikha Gupta	Impact on User Experience while Shopping Online through Smartphone vs Laptop/ Desktop/ Tablet
9.	12:00-12:10	PD3562	Prof. Joseph Kreimer	An Efficient Monte Carlo Method Using Ergodic Markov Chains
10.	12:10-12:20	PD2339	Dr. Nonzukiso Tyilo	Digitally Assessing the Visual Memory of 4-5-Year-Old Children from the Selected Early Childhood Care and Education Centres in South Africa
11.	12:20-12:30	PD7746 (O)	Dr. Vahideh Tahmoorian Askari Boroojerdi	Quantum Entanglement Oscillations brings Intracellular Communication
12.	12:30-12:40	PD7276	Ms. Odeta Gluoksnytė	Formal and Stylistic Features to Portray the Themes of Utopia and Dystopia throughout Alex Garland Novel The Beach
13.	12:40-12:50	PD4047	Ms. Alė Murauskienė	Transformations in Higher Education as Lithuania Integrates into the European Higher Education Area
14.	12:50-13:00	PD7815	Prof. Mikhailenko Olga Ivanovna	Research on the Problems of Educational Work Arrangement in Modern Scholarly Organizations (Based on the Kabardino-Balkarian Republic)
15.	13:00-13:10	PD9757	Prof. Alain Belli	Physiological and Psychological Effects of Short-term Walking Football in Older Adults
16.	13:10-13:20	PD2556	Dr. Sofiene Dellagi	Optimal Preventive Maintenance Strategies for Wind Turbines
17.	13:20-13:30	PD8752	Prof. Moshe Sharabi	A longitudinal study on the Impact of Negative Occupational Events on Individual's Work Centrality
	13:30-14:30			**Lunch Break**

Session II

Session Chair(s): Prof. Vijai Nath Giri

Venue: Zayed University Convention Center

18.	14:30-14:45		**Expert talk by Prof. Vijai Nath Giri on Impact of Innovative Culture on Organizational Effectiveness: The Mediating Role of Employee Engagement.**	
19.	14:45-15:10		**Poster Presentation Session**	
		PD5927	Ms. Veena Nayak	Sensitivity Analysis of TOPSIS Method for Stakeholders Ranking
		PD4506	Dr. Benyamina	Effect of Rubber Powders on the Behavior of a Crusher Sand Mortar
		PD6004	Dr. Yerulan Sagidolda	Production of Porous Silicon by the Method of Electrochemical Etching in Alternative Electrolytes

		PD2837	Dr. Mustapha Sadouki	Physical Parameters Impact on the Ultrasound Low Frequency Reflected Signal from Rigid Porous Materials - Frequency Equivalent Fluid Theory Approach
		PD5500	Mr. Serik Khokhlov	Structure of Accretion Flows in the Nova-like Cataclysmic Variable RW Tri
		PD2573	Prof. Eli Aghion	Development of Innovative Biodegradable Metal Implants
		PD8558	Prof. Stefan Voll Beko	Akt (Motional Exercises for Cognitive Activation) A Research and Application Project
		PD9256	Dr. Nonzukiso Tyilo	Emotional Intelligence Skills as a Vehicle for Collaborative Learning During Early Childhood Years
20.	**15:10-15:20**	PD8424	Dr. Ben Mollov	The Impact of Jewish Arab Interreligious University Encounters: Qualitative and Quantitative Data
21.	**15:20-15:30**	PD4735 (O)	Mr. Johnny Michael Sakr	Prenatal Legal (Non) Persons and Their Rights
	15:30-16:00			**Tea Break**
22.	**16:00-16:10**	PD8973 (O)	Prof. Benjamin Zierock	Creative Participation through Hackathons
23.	**16:10-16:20**	PD5514/PD5033	Prof. Katja Bakija/ Ms. Marija Konsuo	Ways of Using the Literary Heritage in the Cultural Presentation of Dubrovnik
24.	**16:20-16:30**	PD5705	Prof. Ashish Dwivedi	A Study to Analyze the Challenges to Industry 4.0 for Circular Business Models
25.	**16:30-16:40**	PD3041	Dr. Golan Carmi	Financial Mobile Apps as per Diffusion of Innovation Theory
26.	**16:40-16:50**	PD6438	Dr. Raigul Doszhan	Sustainable Development of Kazakhstani Companies

Day2: Tuesday 20 December 2022: Abu Dhabi City Tour

Dress Code for visiting Sheikh Zayed Mosque: All are requested to adhere to the dress code. Transparent (see through) clothing, Shorts/ Shirts, Sleeveless shirts/ Tight clothes are not allowed.

The bus will depart from Zayed University Convention centre at 9:30 am

The bus will stop at the parking of Financial Centre Metro Station at 10:00 am to pick the participants

Day3: Wednesday 21 December 2022: Dubai City Tour

The bus will depart from Zayed University Convention centre at 9:30 am

The bus will stop at the parking of Financial Centre Metro Station at 10:00 am to pick the participants

Day 4: Thursday 22 December, 2022

Session III

Session Chair(s): Dr. Shabeera Tharol Padinilath and Prof. Elizabeth Chinomona

Venue: Muraqqabatt Hall

	09:00-09:30		**Registration**	
	09:30-9:45		**Expert talk by Dr. Shabeera Tharol Padinilath on Opportunities and Challenges of Integrating Cloud Computing, IoT and Healthcare**	
	9:45-10:00		**Expert talk by Prof. Elizabeth Chinomona on Supply Chain Coordination and Firm Performance in the Construction Industry in Gauteng Province: South Africa**	
27.	**10:00-10:10**	PD6266	Dr. Jamal Salah/ Dr. Khaled Al Mashrafi	Some Propositions on Mathematical Models of Population Growth
28.	**10:10-10:20**	PD5465	Prof. Tom Karl Schaal	Change and Adoption of Digital Learning Formats during the Covid 19 Pandemic- A Trend Study from Germany
29.	**10:20-10:30**	PD3753	Ms. Hümeyra Nur Hatipoğlu	A Cluster Analysis on Gender Equality in the World from the Data Set of the United Nations Development Program
30.	**10:30-10:40**	PD4696	Dr. Ntombekhaya Princess Caga	Academic Writing Difficulties of English Second Language Learning: What Lecturers Have to Say
31.	**10:40-10:50**	D6459	Prof. Nadelda Jankelova/ Mr. Norbert Sukenik	The evolution of decision-making theories in the context of management
32.	**10:50-11:00**	PD7474	Dr. Ritu Jakhar	Women Entrepreneurship: Case Study of Jaisalmer District
	11:00-11:20			**Tea Break**
33.	**11:20-12:00**		**Poster Presentation Session**	
		PD2882	Dr. Ntombekhaya Princess Caga	Teachers' Perceptions on the use of Question-and-Answer Method in Accounting Classrooms: A Case of Selected High School in South Africa
		PD7298	Dr. Fedorov Ruslan	Mathematical Modeling and Research of Improving the Efficiency of Fuel Combustion in Modern Burners

		PD6569	Dr. Chamchiyan Yury Evgen'evich	Modeling and Investigation of the Effect of Diffusion and Mass Transfer in Capillary-Porous Bodies
		PD7680	Prof. Vladislav Kovalnogov	Development and Research of Digital Twins of the Atmospheric Boundary Layer in the Vicinity of Wind Farms
		PD3326	Dr. Generalov Dmitry Alexandrovich	Modeling of Combustion Processes of Gas and Alternative Fuel in Power Plants
		PD7837	Dr. Merabti Salem	Thermal Insulating Waste Cork Composites
		PD4925	Prof. Omar Bataineh	Applying 5S, Control Charts and CEA to Improve Quality of Production at Fine Hygienic Paper Company
		PD8356	Prof. Amar Mezidi	Impact of Rubber Crumb on How Concrete Sand Behaves
		PD6304	Dr. Bouzid Maamache	Effect of Aging Temperature on the Microstructure and Local Mechanical Properties of a UNSS32750 Super Duplex Stainless Steel
		PD4323	Dr. Brahim Belkessa	Effect of Ageing on Microstructure and Corrosion Resistance of LDX 2101 Lean Duplex Stainless Steel
34.	**12:00-12:10**	PD8325	Prof. Baigunchekov	Defining a Workspace without Singular Configuration of the 3-PRRS Tripod type Parallel Manipulator
35.	**12:10-12:20**	PD6559	Dr. Rahama Salman	IoT Enabled Heart Disease Accuracy Prediction of Healthcare Dataset using Deep Belief Network
36.	**12:20-12:30**	PD6940	Dr. Junaid Saleem	Bimodal Microporous Oil Sorbent Using Polyethylene
37.	**12:30-12:40**	PD3502	Dr. Razieh Khanmohammadi	The Effectiveness of Cognitive Rehabilitation Program on Balance and Gait in Man Schizophrenic Patients with Depressive Disorder
38.	**12:40-12:50**	PD4631	Dr. Riju Jakhar	Decoding the Elements of Visual Merchandising For Online Fashion Retailers
39.	**12:50-13:00**	PD4330	Prof. Mahdi Shahriari	Students' Motivation for Learning: A Practical Guideline for Trainers and Learners
40.	**13:00-13:10**	PD8980 (O)	Ms. Zoldas Sholpa	Ways to Develop the Musical Literacy of Students
	13:10-13:15	**Valedictory & Thanks**		
	13:15-14:00	**Lunch**		

Desert Safari Tour:

Stop 1: 14:00 PM, Zayed University Convention Centre

Stop 2: 14:30 PM, Parking of Financial Station Metro Station

SUSTAINABLE DEVELOPMENT OF KAZAKHSTANI COMPANIES

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ABSTRACT

The analysis of innovations of sustainable development of Kazakhstani enterprises requires a deep assessment of activities from the point of view of sustainable development. Kazakhstan has made significant progress in creating prerequisites for the development of sustainable development innovations.

The objects of the study are companies in Kazakhstan that provide sustainable innovations, and the subjects of the study are business models for creating and managing sustainable innovations.

The purpose of the research work is to analyze the innovations of sustainable development as an effective management model of Kazakhstani enterprises and the answer to the fundamental question – what is the economic feasibility of sustainable development innovations (sustainability-led innovation) and how to build effective enterprise management at the same time.

Research methods include quantitative and qualitative methods, analysis of scientific literature and regulatory framework.

As a results of research work following was done: the analysis of the experience of managing sustainable innovation in foreign countries; a qualitative study was conducted to identify the main barriers to innovation of sustainable development at enterprises in Kazakhstan; developed model for managing sustainable innovation was adapted.

Keywords – Sustainable Development, Sustainable innovations, Sustainable Management in companies

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I. INTRODUCTION

In the modern world, trends in the growth of human activity and excessive consumption of natural resources cause a change in the state of the components of the climate system, reducing the natural increase in natural capital faster than it can be replenished, thereby causing the deterioration of ecological systems [1]. As the world's population grows, these problems will continue to grow unless effective action is taken [2].

Sustainability is a key driver of innovation and competitiveness that may help to solve mentioned above problems. Over the past two years, the number of companies engaged in the production of such innovations in the world has grown by 25% [3].

The need to move towards sustainable development in the global community was recognized several decades ago, for example, by the World Commission on Environment and Development (WCED), which clearly explained the need to change the way we consume and produce goods and highlighted the key role of companies in this endeavor [4]. In recent years, factors of sustainable development, such as respect for the environment, social responsibility, as well as high quality corporate governance, have become increasingly important for investors and society as a whole in Kazakhstan. [4-6].

The government of Kazakhstan is also actively raising the issue of achieving sustainable development goals at the regional and international levels. Companies in the current development environment need to adhere to the concept of the triple criterion, in which equal attention is paid to economic prosperity, environmental protection and social justice as a means of supporting the transition to sustainable development.

Innovations in the field of sustainable development are important not only for preserving the natural balance, but also for enterprises as a new business model. Kazakhstan has made significant progress in creating prerequisites for the development of sustainable development innovations. For many years, following works has been carried out in this direction: the year of "Environmental Protection" was announced, the Environmental Code was adopted, the Council for Sustainable Development was established, the Green Bridge partnership program was launched, various

government programs were adopted, etc. One of the key points can be considered the Strategy "Kazakhstan-2050", where the Government was tasked with the transition to a "green economy" by increasing the share of alternative and renewable energy; increasing the productivity of agricultural land by 1.5 times by 2020; reducing carbon dioxide emissions in the electric power industry up to 40% by 2050; providing 100% coverage of the population with the removal of solid household waste and bringing the level of recycling to 50% by 2050 [7-9].

Companies in the current development environment need to adhere to the triple criterion concept, which places equal emphasis on economic prosperity, environmental protection, and social justice as a means of supporting the transition to sustainable development [10].

Today representatives of the business environment in Kazakhstan have understood the need for a transition to sustainable development. Over the years, the country has been working in this direction.

The purpose is to study sustainability-led innovation development in Kazakhstani companies for evaluating the maturity of these enterprises in producing sustainable innovations.

II METHODS

Systematic literature review including regulatory framework analysis, survey, interview, case study methods. Research design includes the next steps: 1) Surveying 185 companies; 2) extracting 21 companies for conducting an interview; 3) investigating 8 cases of the development of sustainable innovations in domestic companies.

Table 1 – Characteristics of the research sample

№	Company	Company field	Product
1	«Arnasai»	Center for Green Technologies	Collectors, panels, energy-saving and water-saving technologies
2	«Istoki dobra»	Public fund	Social project "Aid squad" Akzhan "
3	International Financial Center "Astana"	Financial hub	"Protection of Natural Monuments"
4	BI Group	Investment and construction holding	Project: "EcoEvolution"
5	Kuntech	Research and production company	Green securities, including green bonds
6	Ulytau	Manufacturing facility	"Green Quarter" residential complex, wind farm
7	"Magnum Cash&Carry"	Trade and retail network	Solar heating devices - solar collectors, solar facades for buildings, solar water distillers, solar light ducts, solar cooling system
8	Al-Farabi Kazakh National University	Education and Science	Energy saving lamps, satellite apparatus, interactive suitcase for physicists, etc.

As table 1 shows, there are 8 companies that were chosen for the case study analysis. Research methods help to evaluate factors affecting the development of sustainable innovations in these companies.

III RESULTS AND DISCUSSION

The study reveals the next research findings:

1. The main barriers were grouped into "State-regulated factors", "Factors dictated by the market", "Factors associated with development", "Information factors". A detailed description of these barriers is depicted below in Table 2.

Table 2 - Barriers to sustainable innovation development in the studied companies

№	Systematic factors	Subfactors
1	State-regulated factors	No penalties for instability;
		Insufficient incentives from the state;
		Bureaucracy and indifference to the problems of sustainability of local administrative structures;
		Weak legal framework regulating sustainable development;
		Lack of financing instruments for sustainable development;
2	Factors dictated by the market	Import and smuggling of harmful products and technologies into the country;
		Market competition;
		Macroeconomic instability of the economy;
		Weak demand for sustainable goods;
3	Development factors	Underdeveloped infrastructure for sustainable projects;
		Lack of radical innovation in product and process development;
		Low return on sustainable products and processes;
		Lack of competent specialists in this area;
		Various risks manifested in the course of work;
4	Information factors	Low awareness of the population
		Lack of promotion of sustainable development and the necessary information.

As Table 2 shows, there many groups of factors that negatively affect the development of sustainable innovations in the investigated companies.

2. The interview results show that the most frequently mentioned barriers by case study participants are bureaucracy, lack of awareness, and lack of information.

3. Most companies (78%) buy the existed foreign models and technologies to produce innovative products and adapt them in practice. There is a lack of knowledge and skills to create own unique products and technologies that may be explained by the low maturity level of innovative and technological development of the country and lack of qualified specialists in this area.

4. As research results show, 4 companies meet the 1st level of sustainable innovation maturity, 2 companies meet the 2nd level, 2 companies focused their efforts on the transition to the third level. There is a description of maturity levels of companies in Table 3.

Table 3 - Maturity Levels for Sustainable Innovations

Maturity level	Name	Description of innovation
0	Passive / Lack of innovative activity	No activity or 'cosmetic' statements of intent based on public relations
1	Improving innovation	Innovation based on the concept of 'Doing what we usually do, but better', removing waste, reducing the footprint of existing processes, increasing efficiency
2	Capability-Driven Innovation / New Products/ Processes	Development of new products, processes, services that open up an innovation space
3	Systematic innovations	Creation of new models at the system level that contribute to other fields.

As Table 3 shows, there are 4 levels of sustainable development maturity that have specific features. The study evaluates the chosen companies according to these characteristics that are shown in Figure 1.

The Figure 1 presents the results of the evaluation.

Figure 1. The results of the maturity level evaluation of chosen companies

The study develops a model for managing the transition of these companies from low to the high level of the development. Detailed description of the model for the mentioned levels is depicted in the Figure 2.

	OPERATIONAL OPTIMISATION	ORGANISATIONAL TRANSFORMATION	SYSTEMS BUILDING
Innovation objective	Compliance and efficiency	Novel products, services or business models	Novel products, services or business models via new networks
Level of business model innovation	Little, if any	Basic changes, without challenging the core business logic	Radical changes, including a redefinition of the core business logic
Innovation outcome	Less harm to environment	Shared value for multiple stakeholders	Net positive impact on society

Figure 2 Sustainability strategies adopted from Adams et al [11]

One of the goals of our research is the adaptation of the model of innovative activity of sustainable development developed by R. Adams, in practice of domestic enterprises that apply innovations of sustainable development. The model consists of 38 practices identified as a result of painstaking research and allows you to introduce innovations from goals and monitoring to the development of tools and knowledge management systems, regardless of the scope of the enterprise.

In the course of the study, various formats of organizing the adaptation process of the Model were tested:

1. The process of adapting the Model was very flexible and was considered individually for each case, taking into account the specifics of the conditions for the development of the company, and other features.

2. During the experiment, the interest of all project participants and their involvement were taken into account.

3. Taking into account the feasibility of specific ideas and obtaining information for the further development of the idea, customers and suppliers from existing or potential new supply chains were recruited for the experiment.

In Kazakhstan, technologies, tools and guidelines to support companies that have adopted the first two categories of sustainable development strategies are readily available, such as clean production technologies, green design guidelines and environmental management systems. Most of these innovations are adapted from other countries. In this connection, the development and implementation of new business models of companies developing sustainable innovation to integrate sustainability at the operational level (in the first two categories of sustainable development strategy).

The study confirms that barriers exist at all stages according to the Model, that is, at the institutional level, value chain level, organizational level and employee level, and shows that most of the barriers are encountered by companies at the organizational level, followed by the level of the value chain, the level staff and institutional level. The study identifies additional barriers compared to barriers in the emerging literature on sustainable innovation.

Domestic companies focused on creating sustainable innovations should apply the model of innovative activity of sustainable development, developed as a result of an analysis of the cases of 8 Kazakhstani companies and foreign leaders in this area. As shown by the results of statistical methods (regression and analysis of variance) and interviews conducted with the participation of the leaders of the above companies, the implementation of sustainable development activities according to this model will allow to achieve high results.

A very important role should be given to the interest of the country's leadership in the implementation of sustainable initiatives at all levels of company development, regardless of the field of activity. The development of a competitive environment will expand knowledge in the field of sustainable development, increase the flow of qualified personnel and the interest of all persons in the business model of sustainable development.

IV CONCLUSION

Finally, developed model helps companies to group their innovations according to three dimensions. These are parameters such as the focus of innovation on technology or the needs of society, the company's assessment of its relation to society, and the degree of innovation diffusion within the company. The model allows you to make changes at the system level in the process of company management. It will also open up new prospects for economic growth. Businesses can use this model to assess product and technology innovation, maturity levels, and current performance, taking into account individual developments or the organization as a whole.

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