

Plenary session

Chairs:

Rasa Daugėlienė (Kaunas University of Technology)

Raminta Pučėtaitė (Kaunas University of Technology)

Stanisław Umiński

EU Response to the Global Challenge: the Rise of Competition for FDI in the Post-pandemic (University of Gdansk, Poland)

Paulius Klikūnas

Integrating Big Data, Data Science and AI policies in the Security Sector Reform – good practices in EU Common Security and Defense Policy (Kaunas University of Technology; Financial crimes at European Union Advisory Mission to Ukraine)

While transnational organized crime expands using the latest technologies in an agile way, the national law enforcement agencies lack behind in their capacities and capabilities in making use of the most modern technologies such as Big Data, Data science and Artificial intelligence (AI). Meanwhile, security sector reform (SSR) processes are being implemented in several countries with the support of international community. Even though today the advancement in AI and Data Science has the potential to transform the Policing ecosystem in fundamental ways, due to various reasons these modern tools are being often bypassed by international donors. This “gap” generates several drawbacks in the long-term perspective of security sector reforms especially when it comes to mitigating the risks and fighting serious and organised crime. At the same time support to SSR is a testing ground for the “best” EU policies and practices. Sometimes the struggles in the beneficiary country reveal the fact that the advice on “modern”, “European” solutions are far from perfect.

To see how international actors such as EU CSDP Missions, UN Missions and OSCE Missions are making use of Big Data, Data science and AI tools in their support to SSR in third countries, the example of one EU Common Security and Defence Policy (CSDP) Mission will be used here. The European Union Advisory Mission to Ukraine (EUAM Ukraine) and its support to SSR will be studied.

The presentation will focus on how the EUAM has integrated Big Data, Data science and AI tools into Mission strategic advice from its launch in 2014 up to today. The analysis will focus on the specific field of enhancing capacities in fighting organised crime as a part of SSR reforms. This paper will explore concrete initiatives, strategies and capacity building activities to get a grasp if and how new technologies are taken on board, and how the EU is communicating a “unified” position of all Member States in the form of strategic advice in a specific thematic managing the risks and threats of organised crime from strategic to tactical levels. The analysis will also reveal limitations and risks of not incorporating mentioned modern tools into the policy making landscape.

In this conference paper, the analysis will help to identify challenges and lessons learned on the implementation of Big Data, Data Science and AI in combatting organised crime and to study how international support and advice is defined to help manage related risks and threats. Conclusions will highlight the reasons behind the whole research thematic since organised crime policing across the world has undergone a major transformation over last decades and this should be reflected also in the SSR field.

Keywords: Big Data, Data Science, Artificial Intelligence, Common Security and Defence Policy, Security Sector Reform, Policy, Good practices, EU, Security Sector Reform

Session 1. The Diversity of Actions in Europe (1)

Chairs:

Rasa Daugėlienė (Kaunas University of Technology)

Aleksandra Borowicz (University of Gdańsk, Poland)

Sebastian Blesse (ZEW Mannheim), *Annika Havlik* (ZEW Mannheim), *Friedrich Heinemann* (ZEW Mannheim and University of Heidelberg, Germany)

Unbiased Researchers or National Advocates? European Economists and their EMU Reform Preferences

This paper analyzes to which extent European economists follow their countries’ national interests when they form their individual euro area reform preferences. We use a large self- conducted survey among more than 1,800 economists from eleven Central and Eastern EU countries as well as from France, Germany, and Italy. We measure national interests both through aggregate economic indicators such as public debt levels and government

preference scores from the EMU Positions Dataset. The results confirm a strong link between country interests and economists' positions. In particular, the public debt level of an economist's country robustly predicts her euro reform positions. Compared to country interests, individual characteristics play a smaller role. Researchers with international experience are more supportive for new central European instruments. Moreover, researchers that are connected with their governments show an even stronger correlation of their personal views with national interests. JEL Classification: A11, E63, H63

Keywords: [biased research](#), [euro area reforms](#), [expert survey](#), [reform preferences](#)

Vishnu Muraleedharan, Thomas Bryer (Kaunas University of Technology, Lithuania)

Immigrant Integration: The Role of NGO's in Lithuania for Upholding Immigrant Assimilation

Migration and migrant movement are one of the most contested phenomena in the contemporary world due to the large-scale displacement of the people across the globe due to socio-political unrest in the form of wars, internal rebellions, and political upheaval. This led to the scenario of people's movement across the borders in search of better living conditions and safety. However, the aspect of immigration and immigrant integration and assimilation is not a conducive process, and the immigrants have to overcome a lot of socio-political hurdles and hardships for the assimilation and integration into the host society. Regarding the actors facilitating the immigrant integration, one of the significant actors is the NGOs, which facilitates the integration of the immigrants into society. This has been facilitated through the mechanisms of lobbying, advocacy, creating awareness and civic participation, community education, etc. In this scenario, this article tries to find out how the NGO's facilitates immigrant integration and assimilation in Lithuania and what are the mechanisms they employ for immigrant integration and assimilation. The task includes analyzing the qualitative interview conducted with NGO Europos Namai, who are voicing for the rights of immigrants and envisaging measures for migrant integration through their lobbying, education, awareness, cultural integration, and media mechanisms. By analyzing the interview and data sets on immigration in Lithuania, this paper aims to find out how does the NGOs act as a facilitating force for political debates, communication, political decision making, and to create a favorable environment for immigration integration into the Lithuanian society. The primary interpretation can be seen that the third sector organizations play a significant role in the migrant integration into the society, and these possible findings could be made useful for other regions and countries where they are migrant influx and still lack conducive mechanisms for immigrant integration.

Keywords: [Immigration](#), [NGO's](#), [Lithuania](#), [decision making](#), [public policy](#)

Aleksandra Borowicz (University of Gdańsk, Poland)

The Shift of the Policy Towards FDI in European Union: Determinants and Challenges

Since 2016, a change in the policy on foreign direct investment (FDI) can be observed in the European Union. This change was significantly influenced by global processes, which resulted in a particular interest in direct investments carried out by transnational corporations from China, India or Russia. In particular, countries such as France, Germany and the United Kingdom, observed a significant increase in the number of mergers and acquisitions of domestic enterprises in 2010-2016. Therefore, in 2018 the process of creating a European Screening Mechanism was initiated, which entered into force in March 2019. At the same time, at the end of 2019, the outbreak of a COVID-19 virus pandemic stopped the process of further globalization by breaking global supply chains, and by restricting the flow of goods, people and capital.

Keywords: [FDI](#), [screening mechanism](#), [European Union](#), [globalization](#), [COVID-19](#).

Pawel Mlodkowski (School of International Liberal Arts, Miyazaki Kokusai Daigaku, Japan)

Feldstein's 'Global Imbalance' Revisited after 10 Years

The U.S. current account (CA) deficit has continued for many years, since 1982. There have been worries that this situation cannot continue indefinitely. Traditional arguments presented on global imbalances seem undeniable. However, the alternative interpretation of this paper does not recognize the CA deficit as "a gift to the U.S. economy". With 10 more years of empirical evidence there may be some value added in evaluating M. Feldstein (2008) arguments, for example the role of exchange rates. This paper sheds new light on the "global imbalance", suggesting that increasing domestic absorption by China may be an important factor. Disaster-scenarios may be not there to experience. Future developments may be far from those announced, and previously expected. JEL: E21, F14, F32

Keywords: [global imbalance](#), [U.S.](#), [current account](#), [foreign exchange reserves](#), [the dollar](#).

Brigita Janiūnaitė (Kaunas University of Technology, Lithuania), *Lina Gaižiūnienė* (Kaunas University of Technology, Lithuania), *Mariana Orliv* (Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine), *Edita Štuopytė* (Kaunas University of Technology, Lithuania)

Methodological Issues of Evaluation of Design Thinking Method Impact for Competence Development: the Case of Lithuanian-Ukrainian project "Competence Development of Lithuanian and Ukrainian Public Sector Employees Using Design-Thinking Methodology"

The aim of the study is to substantiate the methodology of impact assessment of design-thinking as an approach to the development of innovative competence. The objectives of the study: 1) to substantiate the theoretical concepts of research methodology; 2) to justify the fundamental characteristics of empirical research in the context of theoretical concepts; 3) justify the strategy of the impact assessment study and present its model; 4) to present the results of a pilot study on the application of the Design Thinking mindset instrument in Ukraine. The research methods used: literature analysis; modelling; survey-in-written.

The key results: The research methodology of design-thinking method impact, competence development and adaptation is based on Kirkpatrick's (1996) educational impact assessment model, Westera (2001) competence model, as well as the approach to identifying design-thinking (Dosi, Rosati, Vignoli, 2018). The essential characteristics of empirical research that were determined in the context of theoretical concepts are the following: reaction to training; learning; behavior/results; identification of adaptable elements; adapting adaptable elements to the audience; adapted element test; adaptation assessment, which served as basis for the construction of the research instruments. The research strategy consists of 4 stages: in the first stage, the research methodology is substantiated (research methods are chosen (educational experiment, written survey), sample, research instrument is justified, research process and ethical principles are planned); the second stage - the training program is developed/ adapted by performing the analysis of scientific literature and document analysis. It is validated in pilot study with representatives of Ukraine - lecturers who will conduct trainings for public sector employees at a later stage. Later, this program is employed in educational experiment; the third stage - an educational experiment in Ukraine and Lithuania, organising written surveys and data collection to empirically identify changes in the competence of specific learners in specific cases depending on the context and the design-thinking approach. Blonder et al. (2008) and Hord et al. (2013) emphasize that each innovative approach must be adapted, and adapted to the context in which it will be used. The fourth stage includes the analysis of the research results obtained in Ukraine and Lithuania.

After validating the Design Thinking Mindset instrument in Ukraine, the following aspects were highlighted: 1) the instrument provides the detection of the most and least developed qualities for a group of respondents, which can be taken into account in the process of their further training (in our experiment the most developed for lecturers are the ability to problem reframing and openness to different perspectives and the least ones are embracing risk and tolerance for uncertainty); 2) it is not possible to get always objective self-esteems in the questionnaire (for example, a young lecturer cannot feel completely comfortable with what is unknown); 3) the activity of the participants of the experiment after the training indicates the importance of their motivation and job environment, but these quality were not given due attention in the questionnaire.

Concluding remarks: the developed methodology allowed to construct valid instruments as well as research strategy to achieve the planned aim of the research. Methodological challenges are related to the adaptation of instruments to different socio-cultural media (use of instruments in two languages as a pivot language - English, harmonization of terms, phenomenon, as well as perception); different adaptive competencies of the research team members; the nature of the institutions, the culture, etc.

The paper is supported by the project: Competence Development of Lithuanian and Ukrainian Public Sector Employees using Design-Thinking Methodology (PubCom-DT) (Nr.S-LU-20-5)

Keywords: design-thinking method; competence development; public sector; impact evaluation; research strategy.

Session 2. The Diversity of Actions in Europe (2)

Chairs:

Biruta Sloka (University of Latvia);

Velga Vevere (EKA University of Applied Sciences, Latvia)

Rasa Daugėlienė (Kaunas University of Technology)

Austė Kiškienė (Kazimiero Simonavičiaus University, Lithuania), *Arūnas Augustinaitis* (Kazimiero Simonavičiaus University, Lithuania), *Levan Bzhalava* (University of Turku, Finland), *Jari Kaivo-oja*, *Theresa Lauraeus* (University of Turku, Finland; Kazimiero Simonavičiaus University, Lithuania)

Towards Data-driven Smart Specialisation Strategy with Horizontal and S3 Priorities in the Lithuanian Economy

The purpose of study is linked to Lithuanian Smart Specialisation Strategy, which aims to be data and knowledge driven strategy. From the perspective of endogenous growth strategy horizontal aspects of Smart Specialisation Strategy are highly relevant. This study is focused on horizontal policy integration challenges of Lithuanian growth strategy. Horizontal priorities are in Lithuanian case study: (1) immigration and migration, (2) labour market and (3) social inclusion. S3 priorities in this case study are (1) Laser technology, (2) AI/Robotics technologies and (3) digitalised tourism industry. In these S3 priorities Big Data analytics plays a key role. The study provides a system-theoretical framework for elaborate Lithuanian S3 strategy to integrate horizontal aspects to the Lithuanian Smart Specialisation Strategy. The purpose of our research is underline strategic importance of national horizontal priorities. The role of Big Data analytics and Data libraries can be fundamentally important in the fields of horizontal and S3 priority setting.

The study design is focused key elements of Smart Specialisation Strategy of Lithuania, gaining comparative advantages, higher resilience levels, higher innovation activity and better entrepreneurial discovery processes (EDPs). The study aims to help decision-makers and stakeholders in Lithuanian and other EU countries to see big picture of Smart Specialisation Strategy with horizontal and S3 priorities. The methods and basic methodological toolbox of S3 are presented in this study paying special attention to Data-based business intelligence and Big Data analytics. This study demonstrates these critical data-driven strategic aspects for the Lithuanian economy.

The study provides a novel framework for data-driven S3 analyses in the Lithuanian economy. The key results are linked to data-driven observations and insights of the study. The study provides, among many things, new information about export-import dynamics, immigration/migration flows, inbound/outbound tourism flows, start-up ecosystem and new technology foresights results (Laser technology, AI/Robotics technologies and digitalised tourism industry), which are relevant for Lithuanian economic development and national decision-makers.

Key conclusion of the Lithuanian national case study is that there is need to pay more attention to data-driven future trends of S3 strategy without forgetting visionary targets. This data-driven approach requires more ambient efforts to develop national statistics, data libraries, flexible data pool sharing contracts and Big Data competences in Lithuania to revitalise full endogenous growth potential of the Lithuanian economy.

Keywords: Smart Specialization Strategy, European Union, Endogenous Growth, Data analytics, Big Data libraries, Lithuanian S3 Strategy, System thinking, Horizontal priorities of Smart Specialisation Strategy.

Giorgio Oikonomou (University of the Peloponnese, Greece)

The European Administration as a Facilitator of the European Integration Process: Organizational and Ethical Implications from the Proliferation of European Union Agencies

The formulation of the European Union (EU) administration dates back at the early 1950s following the establishment of the European Community of Coal and Steel (1951), the European Economic Community (1957), the European Atomic Energy Community (1957) and their respective institutional bodies. At that time, European services and Directorates were only a handful and public servants represented a very small number, accounted for very low budgetary expenses, in absolute figures. For instance, in 1958 only 15 Directorates General (DGs) were existed, and in 1960 there were only 2,614 appointed public officials serving the institutions of the European Communities. Throughout the 1970s the number of the permanent European civil servants were less than 10,000, however, this threshold was surpassed in the 1980s. Since then, there has been a considerable increase in the number of public officials serving the EU, nowadays accounting for approximately 37,000 permanent posts, along with new established DGs. In addition, contrary to the very first period of formulation of the European bureaucracy, after 2000 –in particular– there has been a multiplication of new institutional bodies entailed the creation of a plethora of new EU agencies, varying in their organizational form, size, origin of resources and funding, type of management board, policy area and output. Most EU agencies are classified as decentralized bodies, yet there also exist other types based principally on their legal status. In general, the gradual expansion of the EU bureaucracy, in terms of its structures and human resources, has been in line with the process of European integration and the competences that have been transferred by the member states in the EU since the establishment of the Communities thereafter.

The purpose of this study is to explore the evolution of EU administration by focusing and critically examining the role of EU agencies in advancing the European integration process. The research question deals with identifying the factors that account for the formulation of EU agencies and the sharp increase in their number since the 2000s. The tasks are to analyse critical EU agencies' parameters such as their typology, the policy area they deal with, origin of their resources and funding, and their output. The study aspires to offer a full coverage of the total number of EU agencies. In addition, transparency and accountability issues accompanying the proliferation of EU agencies are also considered. From a theoretical perspective, the research takes into account pressures for reorganizational and functional changes that shift the administrative path of the EU administration from traditional to modern organizational patterns. Emphasis is placed on the transformation of the European Commission and the establishment of various types of agencies since 2000 thereafter. Methodologically, the research utilizes quantitative data based on annual EU budgets as well as on official reports and policy papers issued by main EU institutions (European Commission and European Court of Auditors) and agencies. As a result, it is argued that the proliferation of EU agencies has been a direct consequence of the process of European integration and the expansion of the EU in new policy areas following successive reforms of the EU Treaties. In conclusion, the multiplication of EU agencies serves the process of European integration by providing high expertise and delivering effective policy results; however, concerns regarding accountability issues still remain, though to a lesser extent compared to the past.

Keywords: EU administration reform, EU agencies, European Commission, European integration, accountability.

Kieran Robert Spencer (Kaunas University of Technology, Lithuania), *Rasa Daugėlienė* (Kaunas University of Technology, Lithuania)

Lithuanian State Economic Security in Confrontation of Foreign Economic Pressure: Presentation of Research Idea

Since the 20th century the concept of economic security has gained importance in the international community. Rather than simply protecting the physical borders must protect the economic mechanisms that sustain their populations and way of life. The importance of a strong economy can make a state vulnerable to economic coercion from other countries. This makes it more important than ever for states to review their economies and identify potential weak points which potential rivals could exploit to gain political leverage.

These state economic security threats come from unfriendly foreign governments who may seek to use their trading relationship with Lithuania in order to undermine Lithuanian national security and influence Lithuanian national policy. Lithuania is particularly vulnerable to such economic pressure because its potential security threat state is also its largest trading partner. In addition Lithuania must also be prepared for economic retaliation from other global powers, such as China who may seek to use economic leverage to retaliate against Lithuania.

States economic security problem is analysed by many of authors. Andruseac, G. (2015), Armstrong, S. (2021), Azamatova, R., Shadova, Z., & Shorova, B. (2017), Borkova, E., Chekrygina, T., Gontar, A., Plotnikov, V., & Udakhina, S. (2020), Grigoreva, E., & Garifova, L. (2015) propose new approaches of economic security. Hacker, J. S., Huber, G. A., Nichols, A., Rehm, P., Schlesinger, M., Valletta, R., & Craig, S. (2014) analyse a new measure (economic security index) for research and policy analysis. Ignatov, A. (2020) highlighted entrepreneurial performance of the European Union-pivot of its economic security. It is important to mention that scientific research regarding Lithuanian economic security problem are still missing.

The paper seeks to examine the aspects of Lithuanian vulnerability to foreign economic pressure which can be used to improve Lithuanian state economic security. The tasks should be solved are: understand the nature of such state economic security threats so that Lithuania can respond to them and take affirmative action to reduce its vulnerability to future economic aggression. In order to accomplish this the authors will distil and explain key factors related to the phenomenon of state economic security, examine Lithuania's economic security situation, analyse best practice examples from other states, regions, and the world, and recommend specific policy proposals which could improve Lithuania's state economic security. Research methods: literature content analysis, analysis of statistical data, comparative analysis.

Keywords: state economic security, economic pressure, economic security forms, Lithuania

Evija Dundure (University of Latvia), *Biruta Sloka* (University of Latvia)

Tax Incentives for the Third Pension Pillar in Estonia, Latvia, and Lithuania

The main objective of the improvements to public pension systems is to create a balanced three-pillar pension structure and increase public accountability for pension capital formation. Most pension systems are based on the first two pension system pillars – mandatory contributions in the state compulsory unfunded pension scheme and the state-funded or accumulated pension scheme in pension funds. However, the pension level adequacy has been reached by adding the third pension system pillar – voluntary investments in private pension funds. Governments are private pension system policymakers by defining a legal framework and providing tax incentives for voluntary investments for retirement. In the Baltic countries – Estonia, Latvia, and Lithuania, the third pension pillar is at an early stage of its development, and as such, should be particularly stimulated. This research focuses on the tax incentives utilized by the governments of Estonia, Latvia, and Lithuania and aims to ascertain and compare the effectiveness of the tax incentive policies applied to the third pension pillar by the governments of the three Baltic countries. It questions the effectiveness of the incentive mechanisms the governments of the Baltic countries have chosen, which include involving most of the population in the private pension saving programs. The research methods used are the analysis of scientific publications on the previously conducted research, acts of legislation of Baltic countries, as well as an analytical study of statistical data on the development of voluntary pension fund contributions in Estonia, Latvia, and Lithuania. The research results indicate that the tax incentives are the mechanism to motivate the population to create savings in the third pension pillar in all three Baltic countries. However, Latvia being the country with the highest coverage rate of the third pension pillar has the most unfavourable conditions for creating savings. There are no tax incentives on returns on investment and tax-exempt withdrawals in Latvia, while Estonia and Lithuania have all positions tax-exempt. A more detailed analysis of the tax incentives at the contribution stage explains the underdeveloped third pension pillar in Lithuania, as Lithuanian personal income tax reliefs are targeted at low or medium wages or gross income. The research has highlighted the impact of tax incentives on voluntary savings for retirement in the three Baltic countries, opening a discussion about the effectiveness of governments' applied mechanisms.

The research is supported by NRP "INTERFRAME-LV".

Keywords: government, pensions, tax incentives, third pension pillar, voluntary savings

Ieva Brence (Latvian Academy of Sciences), *Biruta Sloka* (University of Latvia), *Ilona Beizitere* (Parliament of the Republic of Latvia)
SMEs Development – Financial Possibilities for Promoting Digitalisation

The purpose of the study is to analyse financial possibilities for promoting the SMEs digitalisation.

The tasks involve: 1) analysis of scientific literature on aid mechanisms available for SMEs in promoting digitalisation; 2) analysis of policy planning documents and normative acts on digitalisation; 3) analysis of timeseries on digital literacy development; 4) analysis on the main challenges the SMEs are facing in receiving the aid; 5) drawing recommendation on SMEs possibilities for receiving aid in promoting digitalisation.

Research methods: scientific publications and previous conducted research results analysis, and the primary methods used: expert survey and the results of the ad hoc survey (WAPI) on companies registered in Latvia in nationally defined sectors are used. Valid responses were received from 2,511 companies, the results were processed by using the SPSS programme. In addition, enterprises affiliated with the Information and Communication sector and their financial needs for development were targeted. (4) the key results that address the specific questions asked: the following questions have been elaborated for the research 1) what is the main trend in receiving the state aid for SMEs 2) what are the main challenges in digitalising the SMEs processes and what is the aid available? The primary interpretations or conclusions drawn: digitalisation will play an important role – from electronic correspondence to electronic invoices and documentation. State aid is not always available for digitalising the processes, however the companies need to calculate the costs – revenues, e.g. time allocated for preparing documentation, less possibility of mistakes and overall – less use of paper. The paper provides several scenarios on implementing digital solutions in SMEs.

The research is done within National Research Program INTERFRAME-LV

Keywords: state-aid, digitalisation, small and medium sized enterprises (SMEs), European Union, Latvia

Matti Laitinen (Business Center, Finland), *Esa Hiltunen* (University of Eastern Finland, Business School, Finland)
Participative Innovation Narratives from Entrepreneurial Perspective

Entrepreneurial innovation is largely viewed as progressive and an unfolding process which have dead-ends, restarts and different phases which are felt to be positive or negative. Study of entrepreneurial innovation and participation provides insight how entrepreneurs conceptualize the situations where they have involved different stakeholders to the innovation process, especially the employees.

The purpose of the study is insight how participative innovation emerges from entrepreneurial perspective. The study seeks understanding how participative innovation, practices and leadership perspective, emerges and are linked to entrepreneurs view in the context of small growing companies. The previous research has not focused more on the entrepreneurial perspective or how the participative innovation is linked to their creative internal processes. This study draws attention on the issues how entrepreneurs see the innovation practices and participation emerging in their specific fields and cases of small growing companies located in Finland.

Stories from entrepreneurs were gathered by interviews, created narratives, and analysed them. The focus was to get insight how participative innovation emerges from the entrepreneur's perspective in companies in their specific context. Also, meanings which entrepreneurs gave for participation and innovation were also discussed. The possible meaningful similarities and differences between the narratives were analysed. Collective analysis gave insight about the key factors for participative innovation cause succeed or fail from the entrepreneur's view.

Results show that the emerged essentials for participative innovation from the managerial perspective are 1) the creation and upkeep of participative culture and systems (psychological safety, communication and socialization, 2) a dialogical approach to solve emerging issues (dialogue, sense of meanings of company activities) 3) individual development (learning and openness in company's culture).

The narrative study shows how companies innovate and develop their businesses in their own context focusing on question what meanings entrepreneurs for the relations and actions of the employees and themselves for participative innovation. According to the study, businesses must be able to validate best practices for the participatory innovation process, adapting it to their own environments.

Keywords: employee-driven innovation; entrepreneurship; entrepreneurial innovation; innovation; participative innovation, narrative study

Biruta Sloka, Ginta Tora, Ilze Buligina, Juris Dzelme (University of Latvia)

Challenges in Reduction of Income Inequalities in Latvia

Recent years were extremely important and hard in finding solutions of inequalities reduction especially in some branches of national economy to support inequalities reductions. The purpose of the study: suggest several educational activities in lifelong learning to increase employability for groups at risk-young people, people before retirement age and in retirement age. The tasks: 1) investigate development of willingness and actual participation in life-long education programs, 2) analyse trends of presence and use of digital skills of individuals. For analysis there are used data of Labour Force Survey, EU-SILC data, databases of CSB of Republic of Latvia. The primary methods used – statistical data analysis using time series analysis, analysis information availability on lifelong learning program availability and analysis of expert survey results. The key results indicate that lifelong training is applied more serious in recent years and bigger share of the population is improving their digital skills, but still there is a significant part of inhabitants which are excluded in many important processes to ensure appropriate standard of living due low income, low level of information on possible participation in life-long learning activities, lack of availability of IT tools, internet access and low level of digital literacy. The primary conclusions innovative solutions of social marketing and application of positive cases publications are important tools to increase social inclusion.

Virtual contacts and social networking should be added to cultural and business activities and life-long learning, initiated by local governments and non-governmental organisations and established using physical contacts. Overlapping complementary tools for the interaction and networking of people belonging to different age groups should be used, such as appropriate combination of face to face contacts with virtual contacts.

The research is supported by NRP INTERFRAME-LV

Keywords: social inclusion, employment, social marketing, life-long learning, networking

Parallel Session 1 A

Managerial Initiatives Towards Development of Europe (1)

Chairs:

Natalie Aleksandra Gurviš – Suits (Tallinn University of Technology, Estonia)

Jurgita Barynienė (Kaunas University of Technology, Lithuania)

Jurgita Barynienė (Kaunas University of Technology, Lithuania), *Živilė Paužaitė* (Kaunas Science and Technology Park, Lithuania)

Added Value of Nordic-Baltic Cooperation for Regional Development

The transnational cooperation is seen as important research object especially in the light of today's world challenges such as euroscepticism, Brexit, Covid-19, migration and others (Gänzle, S. et al. 2019; Oldekop, J.A., et al, 2020). In this context intensive cooperation among the Nordic and Baltic countries can be discovered as new normal for transnational development.

The rationale of Nordic and Baltic countries cooperation is common interest in stability, security and welfare in the Baltic Sea region and beyond, and has existed for quite some time. It should be emphasized that the cooperation in the Nordic and Baltic region has overcome many challenges. Nevertheless, the idea of cooperation in this region is stronger than ever. In the light of global and regional political instability, it is crucial to maintain political dialogue, strengthen and develop cooperation between the Nordic and Baltic countries and rethink the idea of the Baltoscandian Confederation.

A spread of Euroscepticism and stronger populism, Brexit uncovered an existential tension of European integration processes (Penttilä 2016). In response to the European-wide crisis Risto Penttilä (2016) introduced one of the ideas that the Nordic States should react to emerging challenges by deepening the integration between the Nordic countries in the light of European integration processes during their critical moment.

With reference to the context described above, the purpose of the research is to identify the added value of cooperation of Nordic and Baltic countries for further regional development.

The tasks of the research were set as follows:

- to identify advantages of cooperation among countries in the context of different theories and practice;
- to analyse the cooperation of the Nordic-Baltic countries in the period from 1990 - 2020;
- to discuss the EU macro-regional strategies and identify their added value for further regional development.

Research methods: scientific literature analysis, analytical and statistical interpretations of the EU documents as well as future prognosis on cooperation in the Nordic-Baltic region.

Keywords: macro-region, macro – regional strategies, cooperation, Nordic-Baltic region, European integration, processes.

Parallel Session 1 B

Managerial Initiatives Towards Development of Europe (1)

Chairs:

Donata Jovarauskiėnė (Kaunas University of Technology, Lithuania)

Eglė Gaulė (Kaunas University of Technology, Lithuania)

Kristina Babelytė – Labanauskė (ISM University of Management and Economics, Lithuania)

Research Performance Measurement Choices in the Markets of Different Maturity

Knowledge management process as a multi-faceted concept influences functional areas within organization. Alongside to technical foundation, knowledge management capabilities (creation, acquisition, integration, application, protection) determine organizational efficiency. This is especially prominent for universities and research institutes (hereinafter – research organizations) functioning primarily as knowledge producers. The core framework of the strategic management of research organizations targets for research excellence, outstanding academia-business collaboration results, and entrepreneurial potential for innovations. In this way research organizations gain important role for the economic progress within their regional location, for the state's development or advancement of the economy. Surprisingly, diversity of research performance systems across countries and economies have not yet suggested universal receipt for efficient knowledge management processes. Instead, dynamic contexts highlight that strategic management of research organization should be rethought, since the role of R&D and innovation (hereinafter – research) performance measurement is crucial for the formation of the organizational competitive advantage. This paper investigates the peculiarities of research performance measurement that are important for the research organizations seeking to form efficient and market-oriented competitive advantage. Comparative analysis of research performance measurement applied by the research organizations that function in the Baltic States compared to the ones in Sweden is conducted. This choice of differently matured economies (the Baltics States as newly matured markets vs. Sweden as mature market) paves the way for the in-depth analysis of the strategies the research organizations performing in those countries choose. Research performance monitoring and evaluation commonalities and inconsistencies are noted as well as the specifics of different maturity levels of the market important for the research organizations' competitive advantage are discussed. This analysis addresses the research organization's abilities to evaluate the changing economic setting, review its knowledge management framework and realign it to the research performance measurement. Formation of the organizational strategy in this collective mode would raise their competitive advantage. Subsequent to the peculiarities of the knowledge management, strategic management implications are formed.

Keywords: R&D and innovation performance measurement, research organizations, strategic management, newly mature market, mature market.

Natalie Aleksandra Gurviš - Suits (Tallinn University of Technology, Estonia), *Anna-Liza Lvova* (Tallinn University of Technology, Estonia)

Importance of Integrating SDGS into Business process by Telecommunication Operators: Opinion of Estonian Customers

Sustainable development is recognized by the United Nations as a challenge for social and economic policy (Hughes&Johnston (2005), an urgent call for action by all countries addressing all groups of stakeholders (Mio et al., 2020) and one of the main priorities for business community all over the world (Tsalis et al., 2020). Successful implementation and achievement of these goals should be a result of joint efforts of all countries and nations. And while a general success is observed in case of certain SDGs, others still require joint efforts and cooperation on both national and international level. A vital role is assigned to businesses which can also contribute to achievement of SDGs by integrating them into everyday processes.

The aim of the research was to reveal customers opinion on the importance of embedding SDGs by businesses into everyday process in Estonia.

The telecommunication operating companies were chosen due to their central role in the modern business world and huge impact on nearly every aspect of society. There was conducted a survey in a form of questionnaire among customers of these companies and 512 responses were collected in a period of September 2020 –February 2021. Results of the study demonstrate stakeholders connect on the achievement of the SDGs and revealed that the embedding of several SDGs: 3 (good health and well-being), 4 (quality education), 6 (clean water and sanitation), 12 (responsible consumption and production), 15 (life on land) into business process is considered by customers to be the of the highest priority. Authors believe that the study with its findings intends to benefit SDG implementation by business companies in Estonia and provides a pattern for further developments of sustainable policies and strategies.

This work provides one of the first studies in Estonia contributing towards understanding of the stakeholders' opinion whether businesses are supposed to embed the SDGs into their activities.

Keywords: Corporate social responsibility, sustainable development, SDG, telecommunication industry, implementation

Silva Jeromanova – Maura (Business University Turība, Latvia), *Rosita Zvirgzdina* (Business University Turība, Latvia)

Social Entrepreneurship – a Business with Added Value During COVID – 19

Since April 1, 2018, it is possible to register social entrepreneurship in Latvia as one of the types of entrepreneurship. Covid - 19 crises have brought new changes and become a good precondition for the development of social entrepreneurship, as the crisis increases the number of unemployed, many over the age of 55, closed schools and children need to continue their home distance education, many parents have to stay home and also have to work from home or choose another working time - half-staff or less. In these circumstances, there is an increasing need for active state and local government action to support the population, as well as more and more opportunities to restructure existing companies and transform the operations of existing companies. Due to the COVID-19 pandemic, the classification of persons at risk has been supplemented and currently 13 risk groups have been identified in Latvia. The crisis is a good precondition for the development of social entrepreneurship in Latvia, because each crisis can develop new skills.

Linutė Kraujutaitytė (Klaipėda University, Lithuania)

Constructing the Idea of Justice Governance Research

The idea of justice governance research involves the study of the ways on how such categories as ontology, epistemology, anthropology and axiology might be mutually interrelated in order to shape coherent methodology for constituting a holistic matrix to guide our empirical research efforts. The concept itself does not offer clear set of heuristic tools. On the contrary, students and researchers find it quite difficult in building its methodology that is worth application for grounding data from everyday living conditions. In this paper, using such methods as reflection, genealogy and archeology, we translate the idea of justice governance research into its methodology first, and into the working-ready idea, second. The aim of doing so is to demonstrate the way on how ideas create reality, at least that one which has to do with our language and cognitive capacities. First, we reflect upon a real case study to make clear on sources and structure of the idea of justice governance research. Second, we trace various strands of thoughts on justice administration research, pointing to different methodologies. Finally, we describe one case as a peace of illustration on how in fact researchers in the area of public administration grapple with conducting a brilliant peace of constructivist research doing justice not just for the sake of the discipline and practice of public administration but for society, including citizens, interest groups, business and academics. We may argue then, that this way is easier to understand better 1) what it means the idea of justice governance research, 2) how to run a cycle of constructivist research process from its starting point to its relatively final stage 3) as well as what the main principles of constructivist research are.

Keywords: constructivist research, methodology, justice, public administration, governance.

Eglė Gaulė (Kaunas University of Technology, Lithuania), *Donata Jovarauskiė* (Kaunas University of Technology, Lithuania)

Customer Value First: Improving the Customer Experience Value Creation in Public Services

Governments around the globe are recognizing the central importance of the customer experience. Although customer experience theory and practice are much more developed in the business companies but it's increasingly being discussed in the context of public organizations for public services delivery too. Governments worldwide are increasingly focusing on customer experience value creation as they seek to improve the overall performance of government and increase citizen trust. Governmental organizations are embracing a number of different but highly complementary approaches in their customer experience value creation: customer-centered design using the co-creation; service design using the co-production; inclusive design using the co-design.

The purpose of this study is to reveal the customer experience concept and the customer experience value creation application in public services.

The study covers the following aspects answering the questions what, why, how:

- the customer experience value creation concept
- the value of customer experiences creation in public services
- the co-creation, co-production and co-design seeking for better customer experience value in public services

Keywords: customer value; customer experience; public services; co-creation, co-production and co-design in public services delivery.

The aim and tasks of the research are to study and model new business management methods not only in social enterprises, but also in business in general. Crisis always means an opportunity to re-examine life and systems, business structure. The constraints of the COVID crisis - mainly work from home - require different management of the company. The time and the situation to which we are already accustomed increasingly confirm that technological development allows us to work from anywhere - regardless of the country, region, job opportunities. This rhythm of work requires a completely different management style, but it also gives more and more opportunities to involve people with special needs in work, because the opportunity to work from home is not strictly limited. Teleworking allows many people from at-risk groups to integrate into normal life because there is no close daily contact with colleagues who did not always accept people with special needs. When the work done is strength, well-organized collective performance, then the working day regime, limited, strictly defined working hours, workload, as well as other factors that were very important in the past - COVID is not so important during the crisis. The crisis has forced us to learn to organize work, to do it in a completely different way. As a result of the study, the authors conclude that such a working regime is possible in almost all sectors, the changes are not only local, because the crisis is global. Research methodology will be used: logically constructive approach - analysis of judgments and results; synthesis method - to combine elements of one system; social research methods - interviews - to obtain primary information and perform its verification. The result is the basis for the conclusion that the crisis is a good precondition for the development of social entrepreneurship in Latvia.

Keywords: social entrepreneurship, COVID-19 crisis, population risk groups, social impact

Natalja Tocolovska (Riga Graduate School of Law, Latvia), *Agne Cakure* (Riga Graduate School of Law, Latvia)

Analysis of the Legal and Regulatory Situation of the Uncovered Corporate Bond Issuance in the Baltic States: is There a Common Framework Possible?

While the development of the Baltic corporate bond market is based on the uncovered bond segment, the elaboration of the legislative base has a devoted emphasis on the covered bonds. The shift from a country-focused to the pan-Baltic-focused capital market has been publicly acknowledged by the governments (Ministry of Finance of the Republic of Latvia, 2018) and is in line with the ongoing Capital Markets Union initiative of the European Commission (The High Level Forum on the Capital Markets, 2020). Moreover, a pan-Baltic covered bond legal and regulatory framework has been initiated (Ministry of Finance of the Republic of Lithuania, 2019). The strong demand for the corporate bond segment in the Baltics (the average number of issues listed in the period 2009-2019 reached 44) where no covered bonds are traded on Nasdaq Baltic (Nasdaq Baltic, 2020) creates the need for a unification of the uncovered corporate bond legislation. The existing academic research is relatively modest on analysing legal frameworks of corporate bond issuance. The studies examine the division between domestic and international (typically Eurobonds) legal issuance frameworks with more focus on the legislative frameworks as related to the terms of issuance. Few articles consider a new supranational bond issuance framework while the interpretation of the issue is radically diverse. There is no existing academic research on the legal framework of the uncovered corporate bond issuance in the Baltics. The aim of this research is to reveal the feasibility of the development of a pan-Baltic uncovered corporate bond issuance framework by analysing the existing legal and regulatory documentation of the corporate bond issuance in the Baltic states. The research provides a limitation for the corporate bond issuance process legislation in the form of information disclosure requirements and the prospective situation of a default of an issuer. The research presents primary data analysis

Karlis Ketners (BA School of Business and Finance, Latvia)

Features of Spending Reviews in Latvia: Experience to Support the Efficient Management of Public Funds

The purpose of the paper is to analyse the implementation of spending reviews in Latvia, to characterise present approaches and propose changes in institutional approach and methodology for future spending reviews. To achieve the aim the characteristics of spending reviews in Latvia conducted during 2016 – 2021 years for annual budgets are analysed. The research examined the spending review in Latvia as a process and as an evaluation of the budget expenditures. The scientific literature review, analysis and synthesis, induction and deduction methods were employed to execute the research. The author claims that general success of spending reviews in the country depends on cooperation between line ministries and institutional conditions for the review process. The author views adoption of the general methodology for the recurrent spending reviews elements as one of the necessary steps that should be followed by adoption of the regulations on procedures for steering committee and working groups. Based on Latvian experience approach for steering committee with roles and responsibilities of stakeholders is described. Proposals for information base of spending reviews and program efficiency evaluation are worked out. It can be concluded that re-prioritisation of budgetary spending, proposals for future expenditures reallocation are integrated into the budget process. Recommendations on improving the spending review process and possible changes to the budget law legislation for the integrated approach in budget governance and the use of budget program effectiveness and efficiency evaluation, monitoring of financial management quality and efficiency auditing are proposed.

Keywords: the budget law, spending reviews, budget process, budget expenditure prioritization, performance budgeting

Kristine Casno (University of Latvia), *Biruta Sloka* (University of Latvia)

Social Enterprises in Latvia: Building up Digital Skills to Reduce Social Stratification

Latvian social enterprises and social entrepreneurship are becoming important since the adoption of the Social Enterprise Law in 2017 (effective as of 01.04.2018). The number of social enterprises with the legal status and the number of financial grants awarded to social enterprises has been steadily increasing, reaching 161 and 110 of them have received support over 7 million EUR as of 28.02.2021, data of the Register of Social Enterprises. Covid-19 crisis is continuing to have a negative effect on the sector since Latvian social enterprises were not provided any complementary support despite the double-bottom lines they are achieving. Inability to provide structured support mechanisms in place for social enterprises may have a negative effect on their ability to achieve their social mission, thus diminishing their capabilities to minimize social stratification within Latvian society. In the face of crises, such as Covid-19, digital skills are of utmost importance as often the only way for social enterprises to continue operations, achieve their social goals and remain financially sustainable is to fully embrace the digital environment. While some enterprises are better at embracing the digital environment, others find it more challenging. The purpose of the study is to investigate the activities of Latvian work integration social enterprises in the digital environment and search for effective solutions for strengthening their digital capacity. Tasks - (1) analyze existing research (2) analyze social enterprise level of activity in the digital environment (3) investigate social enterprise management needs for digital skills improvement. Primary research methods – analysis of

of the in-depth interviews with pan-Baltic legal professionals in the corporate bond issuance segment conducted in the period December 2019- March 2020. The research demonstrates that the concern of the information disclosure for the issue of corporate bonds is covered under the new regime of the Prospectus Regulation, where further harmonisation of the smaller scope of issues is needed. The national insolvency laws in the Baltics are yet different and need to be harmonised for the default of the issuer. In the result of the research, the idea of a proposal for a pan-Baltic legal and regulatory framework for uncovered corporate bond issuance is evaluated as a feasible action corresponding both to the goals of the Capital Markets Union and a pan-Baltic capital market development. The research methods used in this article are scientific publication analysis, document analysis, and in-depth interviews.

Keywords: [Baltic states](#), [corporate bonds](#), [corporate bond issuance](#), [legal and regulatory framework](#)

Jelena Titko (EKA University of Applied Sciences, Latvia), *Anna Svirina* (Kazan National Research Technical University named after A. N. Tupolev – KAI, Branch Vostok, Republic of Tatarstan, Russian Federation), *Tatjana Tambovceva* (Riga Technical University, Latvia), *Viktorija Skvarciany* (Vilnius Gediminas Technical University, Lithuania)

Differences in Attitude to Corporate Social Responsibility Among Generations

Purpose of the study is to investigate the employees' attitude to CSR practices and reveal the differences in staff perceptions within different groups of respondents. The tasks to be accomplished are: 1) to investigate the differences of CSR perception between males and females; 2) to investigate the differences of CSR perception among representatives of different generations; 3) to investigate the differences of CSR perception among representatives of different sectors of economy. The online survey was conducted, using the authors' developed research instrument (questionnaire). In total, 129 respondents – employed Latvian citizens - participated in the survey. To assess the influence of age, gender and other control characteristics in the sample the authors had implemented regression-based moderation analysis in the SPSS environment. The analysis indicated the moderating role of gender in perception of corporate social responsibility, which appeared to be strong, especially in terms of leveraging business honesty as a predictor. The sector, too, appeared to be a moderator, though it was much less statistically significant than gender. On the other hand, generation appeared to be an independent and significant predictor of corporate social responsibility perception itself, while its moderating effect was insignificant. The findings in the paper support existing literature in terms of moderating role of gender as outlined previously; yet, while this research estimated that males are valuing corporate social responsibility higher, than females, while our results estimate the opposite. Our research had revealed that age (generation) is a significant factor, which defines personal attitude towards corporate social responsibility, i.e. the older generation value CSR higher, than the youngsters. We have not found any correlation between economic sector and corporate social responsibility perception.

Keywords: [corporate social responsibility](#), [perception](#), [gender](#), [generation](#), [sector](#).

social enterprise activities in the Internet and social networks, interviews of management of social enterprises on digital skills improvement options. Research results indicate a need to invest concentrated efforts towards supporting the social enterprises at their initial entry into the digital environment.

Research is supported by NRP INTERFRAME-LV

Key words: [social entrepreneurship](#), [social enterprise](#), [social inclusion](#), [social stratification](#), [digital skills](#)

Elīna Vikmane (Latvian Academy of Culture)

Sustainability Priorities in the Heritage Sector: Tendencies from Latvia's Nine Most Visited Museums

A vibrant debate about the role and participation of museums in urbanisation, industrialisation, human rights protection, technological progress, climate change and other global social challenges has persisted in the field of museology ever since the boom of the so-called 'new museology' in the second half of the 20th century, which coincided with the trending of sustainable development as a concept that deserves our full and immediate attention. This debate was indeed all-embracing, not tied to one specific approach to museology, be it French, British, sociomuseological or postmodern. Ever since the UN General Assembly adopted its 2015 resolution, "Transforming Our World: The 2030 Agenda for Sustainable Development", setting the objectives for the social, economic and environmental pillars of sustainability that emphasised the shared responsibility of every individual and institution, sustainable development goals have become a universal benchmark for the museum sector and its development. At the same time, critical voices have cautioned against underrating the multidimensional role of culture in the categories that define the pillars, goals and indicators of sustainable development. These critics have advocated for recognising culture as the fourth pillar of sustainable development or even framed it as a necessary foundation for economic, social and environmental sustainability. Admittedly, despite this longstanding discussion, sustainability issues have only recently breached the communicative discourse of Latvia's museum sector. Some of the most pertinent examples of this breakthrough include the 2020 information and education campaigns driven by museum-related NGOs, the adding of a sustainability-themed case-study and lived-experience section to the national museum platform (a new public-access electronic resource) in 2021 and the drafting of a new museum development strategy for 2021-2027.

This paper aims to propose the first-ever critical review of sustainable development priorities in Latvia's museum sector as they stood from 2015 to 2020.

The research method used in the study is content analysis. The study covers Latvia's nine most popular museums with the annual share of visits up to 50% of its total rate. Initial subcategories for the cultural, social, economic and environmental sustainability categories are inferred from a critical review of relevant literature. Analysis of pertinent government policies for fostering museum development serves to adjust the original subcategories and coding rules when such adjustments are deemed necessary, increasing the trustworthiness and credibility of the study. Finally, essential strategic documents such as development plan, collection policy and communication policy in each of the nine museums are analysed and subcategorised, eliciting standout themes framed as sustainable development priorities. Research objectives include (1) examining the development policies of

Velga Vevere (EKA University of Applied Sciences, Latvia), *Edgars Cerkovskis* (EKA University of Applied Sciences, Latvia), *Aija Sannikova* (EKA University of Applied Sciences, Latvia)

Social Entrepreneurship Intentions Among Business Students in Latvia

Theoretical literature has identified a number of factors that determine social entrepreneurship intentions. Social entrepreneurs play an important role in the economic and social developments of the communities in which they operate. They are a special type of entrepreneur, driven by a variety of motives, including the alleviation of poverty, hunger or illiteracy; the improvement of human health; the reparation of social, legal or economic injustice; and the preservation of the environment for future generations. The career aspiration of social entrepreneurs can be encouraged if youths are given early educational exposure when they are young. The purpose of this study is to identify social entrepreneurship intentions among business students in Latvia. The tasks are the following: (1) to accomplish analysis of special literature; (2) to work out methodology; (3) to carry out the empirical research; (4) to work out conclusions and recommendations. The empirical research involves the survey of business students, applying snowball sampling method and using 5-point Likert scale questionnaire. The results are interpreted using methods of descriptive and inferential statistics. The conclusions of the research have a practical value, as they make it possible to identify the problematic areas of business education in regard to the social entrepreneurship.

Keywords: social entrepreneurship, business education, planned action theory, career aspirations, social responsibility

Parallel Session 2 A

Social initiatives towards development of Europe

Chairs:

Raminta Pučėtaitė (Kaunas University of Technology, Lithuania)

Inese Pelsa (University of Latvia)

Rimantas Rauleckas (Kaunas University of Technology, Lithuania)

Mikkel Stein Knudsen (University of Turku, Finland), *Marianna Birmoser Ferreira – Aulu* (University of Turku, Finland), *Jari Kaivo-oja*, *Jyrki Luukkanen* (University of Turku, Finland)

Energy Research Infrastructures in Europe and Beyond: Mapping an Unmapped Landscape

European research and innovation policy highlights the importance of transnational, scientific collaboration, which concentrates and magnifies resources for conducting research and foster innovation. Modern science, the notion goes, requires unique global competitive capabilities, which individual institutions, or even individual European countries, often cannot provide by themselves. Joint facilities and Research Infrastructures (RIs) are therefore of high importance. In official documents, Pan-European RIs has been termed not only as a research policy pillar, but as 'engines' driving forward the European Union economy, and Horizon Europe sets aside €2.4 bn EU funding (2021-2027) particularly for RIs.

Considering the large-scale funding and the perceived importance of RIs, a better understanding of their roles, functions, and usefulness is an important aspect of European integration studies. While 'Research Infrastructures'

Latvia's museum sector for indicators of the four pillars of sustainable development, (2) identifying the themes of sustainable development that have been communicated as sustainable development priorities to stakeholders by the country's nine most visited museums and (3) using research findings to propose adjustments to the national museum accreditation process for the system to serve as a tool for fostering sustainable development in the museum sector.

Keywords: sustainable development, sustainable development goals, new museology, cultural sustainability, museums, museum accreditation

Parallel Session 2 B

Education methods for sustainable future

Chairs:

Mariana Orliv (Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine)

Brigita Janiūnaitė (Kaunas University of Technology, Lithuania)

Ilze Buligina (University of Latvia), *Biruta Sloka* (University of Latvia)

Challenges of Co-operation of Entrepreneurs, Vocational Education Institutions and Students in the Implementation of Work-based Learning in Latvia

Competitive workforce is an important pre-condition for economic growth. In recent years work-based learning is becoming a significant approach in vocational education and training in Latvia. Work-based learning envisages close collaboration among employers, educators and students, as well as good advice and methodological support by other stakeholders: sector advisory bodies, municipalities and other institutions. To evaluate the situation from the perspective of different stakeholders involved in work-based learning, a survey of employers, educators and students was carried out. The questions of the survey included evaluation of the efficiency of stakeholder co-operation in order to ensure an efficient training process in relation to labour market demands and developments. The purpose of the study: suggest several steps for the improvement of work-based learning process and outcomes. The tasks: 1) study evaluations of different stakeholders (employers, educators and students) on co-operation quality and level with sector expert councils, with representatives of professional

has become a fixed terminology of EU-policy, conceptually defining RIs remain a matter of academic debate. We contribute to the “what is an RI?”-discussion by synthesizing existing literature and combining it with empirical data from the energy domain mapping of project Research Infrastructures in the International Landscape (RISCAPE).

With the collected data, we present a novel, empirical RI-overview to the benefit of global energy research, as well as general RI-policy relevant insights, such as information on organizational frameworks, time-horizon and longevity, financial aspects, data policies, user access, and public outreach.

Finally, the article captures a surprisingly fragmented landscape of energy RIs both globally and in Europe, and intra-organisational concerns with the RI-concept. A discussion of strengths, weakness and feasibility of the RI-framework for the energy research domain suggests that the RI-terminology might be misplaced as a catchall modern synonym for “gold standard world-class science”.

Keywords: research Infrastructures (RI), energy research, landscape analysis, European science policy, Horizon Europe, Europeanisation, Horizon Europe.

Jari Kaivo-oja (University of Turku, Finland), *Ari Karppinen* (University of Turku, Finland), *Saku Vähäsantanen* (Regional Council of Satakunta, Finland), *Teemu Haukioja* (University of Turku, Finland)

Data-based Monitoring Smart Specialisation Strategies in the European Union: Visualising Statistical Indicators of Creative Destruction and Industrial Structure in the Finnish Regions

Monitoring of smart specialisation and regional development is a topical challenge for the European Union. The smooth functioning of the markets including the competitive dynamics of firms, i.e. creative destruction, form key forces to regional progress and development. There are three important aspects in regional transformation and renewal of firms’ production possibilities: (1) Creative destruction (economic progress originates from competition between private firms); (2) Comparative advantage (each region has at least one advantage in production on which to base its economic progress), and (3) Resilience of regions (depending on their industrial structure and market dynamics, each region has area-specific abilities to cope with external economic asymmetric shocks it faces). The purpose of this study is to demonstrate a quantitative framework for regional smart specialisation analyses. This framework can provide crucial information about regions’ smart specialisation potentials.

We approach this task as follows. Index calculation forms our primary method. Economic theories behind used indices are regional economics, international trade, and creative destruction. We measure resilience by applying the well-known Herfindahl-Hirschman Index (HHI). Region’s Relative Specialisation Index (RRSI), that is originally based on the Balassa-Hoover Index, measures revealed comparative advantage. The Index of Creative Destruction (ICD) measures the renewal of firm stocks. We visualise the results by using graphs, map presentations, GAP-analyses, and mechanical risk classification tables that reveal a region’s relative position among all the regions in a country. The three-dimensional GAP analysis for HHI, CDI and RRSI shows gaps between index deviations from the median in comparison to other regions. In addition, a special risk classification table is constructed. It reveals a preliminary risk profile for regions with ‘a traffic light’ analogy. All these methods are justified by economic theory; they can give consistent information for regional developers with relative ease. The study utilises the data sets of Statistics Finland focusing on the years 2016–2018.

The key results are twofold. First, we can show that an economic-theory-based framework can give important practical insights to regional developers about the most important key factors behind smart specialisation strategy and process. Our exercise with the Finnish data exemplifies this point with concrete examples. Second, the

associations, co-operation with municipalities and collaboration with local work-based learning co-ordinators. The primary methods used – statistical data analysis of survey results (employers, educators and students). For data analysis indicators of central tendency or location, indicators of variability, cross-tabulations, testing of statistical hypotheses using t-test and analysis of variance (ANOVA), correlation analysis were used. The key results indicate that better collaboration is needed with municipalities and professional associations in the implementation of work-based learning. The primary conclusions are that promotion of innovative solutions of social marketing and application of positive cases in municipalities and professional associations is needed, in order to facilitate the local stakeholder involvement and increase the overall efficiency of work-based learning.

The research is supported by NRP INTERFRAME-LV

Keywords: work-based learning, employment, collaboration, municipalities, sector expert councils

Jolita Sinkienė (Kaunas University of Technology, Lithuania), *Rasa Daugėlienė* (Kaunas University of Technology, Lithuania), *Rūta Petrauskienė* (Kaunas University of Technology, Lithuania), *Jolanta Vaičiūnienė* (Kaunas University of Technology, Lithuania)

Adaptation of Design-thinking Methodology for the Development of Public Sector Employees Competence During Pandemic Lockdown

Modern societies around the World face constant socio-economic-environmental changes. To effectively respond to these complex challenges the governments at all levels – international, national, regional, and local - need to gain new skills to act dynamically and creatively and thus help their communities to successfully respond to diverse challenges and thus assure their sustainable development.

“Design Thinking” methodology has become one of the most popular modern problem-solving techniques recommended for the search of solutions to complex challenges in any field of social life. Public sector institutions face the need to move from traditional decision-making methods to modern - active, creative, participatory and more effective - ones. In 2020 a group of trainers representing the Design Thinking Lab of Kaunas University of Technology (Lithuania) together with partners from Public Administration Department of Ivano-Frankivsk National Technical University of Oil and Gas (Ukraine) initiated a joint international project aimed to teach the public sector employee groups from Ukraine and Lithuania to apply in practice Design Thinking methodology to tackle the multifaceted challenges faced by different local communities of these two countries.

However during the first stage of project implementation the project team faced a great challenge, too (the pandemic COVID-1) and had to quickly adapt to the new working and communication conditions. The international project team developed and applied a combined methodology to teach public sector employees the Design Thinking (DT) methodology using distance learning technologies and tools.

This paper and report is aimed to present the methodology for DT training of public sector employees during the pandemic lockdown.

Tasks:

- to emphasise the need for, the principles and the process of DT methodology and its application in the public sector,
- to discuss the methodology of DT training of public sector employees before and during the global pandemic lockdown,
- to discuss the results of application the DT training methodology using creative distance learning tools and techniques.

methodology used in this study is relevant and relatively easy to apply also in other European LAU 1 regions as well. Delivered data analytics framework is relevant for all European regions and provides reliable tool for European integration policy. We are convinced that knowledge-based decision-making in smart specialisation policy requires statistical index analyses with regional data sets. We have examined all 70 sub-regions of Finland as a case study to demonstrate the index framework. Each sub-region has its own challenges in relation to the smart specialisation strategy (S3). The main empirical result of the study is that the creative destruction index (CDI) is in relation to the strength of the resilience (HHI) and the strength of comparative advantages (RRSI) in regional economies. Data based calculations of key economic indicators concerning smart specialisation provide a consistent knowledge base for a reality of formulations of European S3 strategies in regions.

Keywords: Creative destruction, European Union, Finland, Indicators, LAU 1, Industrial structure, Integrated S3 Index, Knowledge-based decision-making, Monitoring, Regional planning, Regional policy, Smart specialisation, Statistics, S3 analysis.

Jana Simanovska (Vidzeme University of Applied Sciences, Latvia),

Inese Pelsa (University of Latvia)

The Market Maturity for Public Procurement of Circular Furniture: a Study from Latvia

Public procurement plays an important role in the market development: it makes 14% of the Gross Domestic Product in the European Union thus Public procurement is seen as an important instrument to promote such products and services that better meets society demands, for example, sustainability. Starting from 2015, circularity is an important aspect of sustainability. Furniture is among product groups with significant impact on material footprint therefore approaches to reduce the material footprint and increase circularity are of high value. With this research, authors investigate the market maturity i.e. readiness of suppliers to offer circular furniture and services, as well as readiness of municipalities to uptake it. 20 companies and 27 municipalities took part in the questionnaire. Results show that surveyed companies currently are more ready to offer circular products and services as municipalities require, and a market consultation prior to the purchase might be a good tool to promote circular economy.

Keywords: market maturity, sustainable procurement, green public procurement, circular procurement, furniture.

Vilnis Veinbergs (Turība University, Latvia), *Ivita Kisnica* (Turība University, Latvia)

Possibilities and Restrictions on the Use of Unmanned Aircraft Systems in Security Work

Unmanned aircraft systems (UAS) have become available not only in the military environment, but to every member of society. They can be effectively used in security work, although, if used unprofessionally, UA can pose a threat to the public or the protected object. The aim of the article is to find evidence that the use of UA for the protection of a security object can be of a technical nature. With the introduction of UA as a part of technical equipment for security work, it would be possible to immediately inspect the guarded object and track and/or detain persons with criminal intent, or transfer the data obtained by the video camera recording system to the State Police. The primary data of the research was collected using the survey method, where the general set of research was compiled by security companies that have received the required license for the provision of Technical Security by the State Police. The experience of using UAV in Latvia and in the international environment has been analysed using the case study

The primary methods: literature analysis, on-line survey, observation.

The key results that address the specific questions asked (including quantitative summaries or comparisons), and (4) the primary interpretations or conclusions drawn

- Design Thinking methodology is an effective tool to search for non-traditional solutions of complex problems of modern societies, communities and groups;

- Public sector employees' skills in creative problem solving (including DT) methods must be developed and strengthened (in both Ukraine and Lithuania)

- Design Thinking methodology training is possible and effective using distance learning platforms and tools

However, the "traditional" Design Thinking methodology training process and content should be adapted to the specifics of on-line teaching/learning process. The paper is supported by the project:

Competence Development of Lithuanian and Ukrainian Public Sector Employees using Design-Thinking Methodology (PubCom-DT) (Nr.S-LU-20-5)

Key-words: Public sector, public sector employees training, Design Thinking methodology, pandemic lockdown

Mariana Orliv (Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine),

Brigita Janiūnaitė (Kaunas University of Technology, Lithuania)

Assessment and Development of Public Servants Using the Design Thinking Methodology for the Reforms and Innovations Introduction

The purpose of the study is to investigate the features of assessment of public servants' characteristics and their ability development to introduce reforms and innovations in public authorities using the design thinking methodology. The following tasks were set: 1) to investigate the problems of assessing the personal qualities and behavioral characteristics of public servants before and after training activities; 2) to find out what peculiarities of the introduction of reforms and innovations in public authorities should be taken into account in the assessment of public servants and their practice-oriented training; 3) based on the results of the research, to determine the features of the use of design thinking methodology in the public servants development.

To achieve the research objective, the methods of qualitative and quantitative analysis were used (dialectical research, content analysis, questionnaire survey, expert assessment, correlation analysis, and modeling). The basis for analysis were the results of empirical research conducted during the first stage of implementation of the joint Ukrainian-Lithuanian R&D project "Competence Development of Lithuanian and Ukrainian Public Sector Employees Using Design-Thinking Methodology" as well as the data of OECD "Sustainable Governance Indicators", European Commission "European innovation scoreboard", Quality of Government Institute "Quality of Government", COCOPS project (Coordinating for Cohesion in the Public Sector of the Future), GLOBE research program (Global Leadership and Organizational Behavior Effectiveness), etc.

The key results. 1. The analysis of the results of questionnaire surveys of public servants showed that in many cases the method of self-assessment of personal qualities does not ensure the indicators objectivity. Therefore, such self-assessment indicators should be compared with expert estimates or used to characterize the sample as a whole. In particular, the second approach to the interpretation of the results of self-assessment using the Woodcock-Francis methodology allowed identifying the weakest and most developed qualities of public servants. 2. Based on the analysis of the results of global empirical research in the public sector, the peculiarities of the reforms and innovations introduction in public authorities related to bureaucracy and political influence, drivers of reforms and their outcomes, strict control over the use of resources, evaluation of the performance of public servants have been identified. 3. The research allowed substantiating the proposals for the use of the design thinking methodology

method; secondary data has been obtained from statistical databases and scientific literature, as well as from publicly available sources. The results of the research theoretically reflect the effectiveness of the use of UA and UAS in security work, which will provide an opportunity to reasonably conduct practical research in the security industry environment.

Keywords: security work, unmanned aerial vehicles (UA), unmanned aerial systems (UAS), drones.

Uldis Plumite (Latvia University of Agriculture)

Latvian Theme Park Development in Kurzeme and Vidzeme

The economy of Latvia is experiencing rapid development in the European Union and is active participant of the United Nations and North Atlantic Treaty Organization. In recent years there have been several changes in both sectors and national economic policy. The total population in Latvia was estimated at 1.9 million inhabitants in 2019 and a total GDP per capita was 63% of the EU average, the lowest GDP per capita in purchasing power parity was recorded in Bulgaria - 46% of the EU average, Romania - 60% and Croatia - 62%. Lithuanian and Estonian GDP per capita in 2019 was accounted for 74% of the EU average. Latvia has more than 12 theme parks, but the amusement offer is small. Most of the theme parks are mostly located in Kurzeme and Vidzeme. Attraction Parks historically evolved near the big cities, where the infrastructure is highly developed. The aim is to increase the influx of tourists in regions where tourism products are amusement parks, thus developing more local businesses and the city's environment, increasing the demand for an active economic environment, but regional laws often hinder this development.

The aim of the research is to analyze the possible development tendencies of Vidzeme and Kurzeme amusement parks.

The task of the research is to find out whether regional amusement parks make a possible contribution to the development of regions.

Result of the study helps to analyze Latvian regional economic opportunities in the regions and to assess their contribution to local development.

The following primary methods are used in the paper - synthesis, analysis, dolphin method and factor analysis method.

Keywords: regional development, tourism, economics, economic of regional, theme park.

Kamaldeep Singh (Turiba University, Latvia)

Influencer marketing from a consumer perspective: How attitudes, trust and WOM affect buying behavior

Influencer marketing is a marketing method that more and more companies are using when it comes to marketing brands. The purpose of the study has been to gain a deeper understanding of how social media influencers affect consumers' buying behavior. To understand this, consumers' attitudes and confidence in the phenomenon have been relevant factors to examine. The study also aimed to find out whether Word of Mouth (WoM) or social media influencers have the greatest impact on consumers' buying behavior. The results have shown that social media influencer's impact on consumers' buying behavior depends on whether attitudes are

in training of public servants and evaluation of its results based on the Kirkpatrick model, which will help to introduce reforms and innovations in public authorities and increase their steering capabilities.

The paper is supported by the project:

Competence Development of Lithuanian and Ukrainian Public Sector Employees using Design-Thinking Methodology (PubCom-DT) (Nr.S-LU-20-5)

Keywords: design thinking, assessment, training, public authorities, innovation, reform.

Dmytro Dzvinchuk, Mark Liutyi, Iryna Ozminska, Victor Petrenko (Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine)

3S-leadership Model as a Tool of Using Design Thinking in the System Of Public Governance

The problem of integrated implementation of technology and techniques of design thinking, design management and design leadership into public administration should be considered a priority, as this area is the institutional component that determines the level of either innovative development of a society or its stagnation and decline. The dynamic changes in the intellect, mentality, experience, life values and orientations of modern people set new requirements for leaders in the age of intellectual economy, therefore traditional theories and models of leadership no longer meet the needs of group design-thinking. The purpose of this study is to determine a leadership model most adequate to the principles and criteria of design thinking so as to adapt it to the priority use in the processes and procedures of public administration. The tasks of the study are to analyze the expediency of changes in traditional leadership models and tools oriented to new requirements for design leaders; to outline the conditions for the effective management in the "leader-follower" pair in order to substantiate the role of a leader in design-thinking process and identify the leader's influence on the group's performance depending on the level of his/her mastery of using design thinking methodology; to assess the level of adequacy of the 3S leadership model to the criteria and methods of design thinking. To reach the objectives of the article the method of comparative analysis was used. The results of the analysis of the known models of design thinking processes revealed that this process is a fundamental condition and basis for leaders to create an atmosphere of effective use of their own intellect and the intellect of their followers in "leader-follower" pair for joint creativity and innovation. The conclusions of the study draw attention to the feasibility of and conditions for integrating the intellect of "leader-follower" pair and using for this purpose a model of 3S-leadership, based on common behavioral phenomena of synarchy, syntelect and synergy of its members. The main condition for the group to use design thinking technology efficiently has been defined as the mastery of design thinking methodology by its leader with the simultaneous use of the 3S-leadership model to influence followers, which will allow all group members to re-orient to the criteria of the 3S-model, their intellectual activity to be organized according to the recommendations of design thinking, and the leader to transform into a real design-leader who ensures a collective synergistic effect, i.e. a joint innovative product. Authors believe that the results of this study will contribute to the development of programs for training design-thinking leaders for the national system of public administration.

The paper is supported by the project: Competence Development of Lithuanian and Ukrainian Public Sector Employees using Design-Thinking Methodology (PubCom-DT) (Nr.S-LU-20-5)

Keywords: design thinking, group, management, leadership model, synarchy, syntelect, synergy.

positive or negative. Consumers with positive attitudes towards social media influencers have a greater tendency to acquire what is marketed in comparison with consumers who have negative attitudes towards social media influencers, who instead refrain from buying. Factors that increase confidence in social media influencer are whether the consumer feels connected, honesty and that social media influencer in markets products / services within its area of expertise. What has been shown to play a significant role when it comes to influencing consumers' buying behaviors and attitudes is what the environment's perceptions, opinions and experiences about the phenomenon look like WoM. It has emerged that the respondents have a greater confidence in their surroundings than they have in social media influencers.

This study will adopt a qualitative approach towards collection and analysis of data. Hence this study will investigate influencer marketing from a consumer perspective through a qualitative method with the help of semi-structured interviews. The researcher will conduct a minimum of 5 semi-structured interviews and analyze the data to formulate the required findings of this study.

Keywords: Attitude, buyer behavior, social media influencer (SMI), impact, trust, Word of Mouth (WoM)

Ieva Brence (Latvian Academy of Sciences), *Ina Gudule* (University of Liepaja), *Baiba Rivža* (Latvia University of Life-Sciences and Technologies)

Digitalisation as a Tool for SMEs Sustainable Development

The purpose of the study is to investigate digitalisation as a tool for SMEs sustainable development and the main challenges for SMEs in implementing digital solutions.

The tasks involve: 1) theoretical analysis of scientific literature on investigating digitalisation and its interaction with sustainability; 2) analysis of policy planning documents and normative acts on implementing digitalisation; 3) analysis on the main challenges the SMEs are facing on digitalisation; 4) drawing recommendation of digital solutions for SMEs in interaction to sustainability.

(3) the primary methods used: a survey on 350 respondents representing SMEs and having worked on remote principles for at least three months and thus having faced the challenges on digitalisation, the internal consistency (Cronbach's alpha coefficient exceeding 0.7 when comparing questions) and experts' interviews, representing specialists from state institutions and leading companies in Latvia related to digitalisation processes.

(4) the key results that address the specific questions asked: the following questions have been elaborated for the research 1) what are the main trends in digitalisation in the European Union? 2) what are the main particularities of SMEs in digitalisation. The primary interpretations or conclusions drawn: digitalisation is an important part for enterprise development and have been introduced in the EU policy planning documents for more than ten years already. Digitalisation processes have increased their significance during the Covid-19 when most of the companies and persons started working on remote principles. At the same time there are still many challenges the companies need to face – e.g. necessity to change the overall thinking of inhabitants. Thus different approaches are suggested – from motivating instruments to punishment tools. Digitalisation will develop after the Covid-19 and is strongly related to sustainability paradigms, e.g. less use of paper.

Keywords: digitalisation, small and medium sized enterprises (SMEs), sustainability, remote work, European Union, Latvia

Iveta Linina (Turība University, Latvia), *Velga Vevere* (EKA University of Applied Sciences, Latvia)
Critical Thinking Competence and its Impact on Acquisition of Basic Principles of Entrepreneurship Among Business Students in Latvia

Critical thinking is mental process of analysis and evaluation of information. The source of information can be experience, reflection, observation, communication, etc., as well as study process. Business education is based on the ability to navigate the market situation and make informed decisions. The aim of the research is to understand the students' critical thinking formation and its influencing factors. Based on this, the authors of the investigation study the theoretical basis of critical thinking with the monographic or descriptive method, with the help of a questionnaire assess students' ability to critically evaluate the situation and make decisions based on it. This study will provide an understanding the need for critical thinking and its development in the process of business education. In the result, the authors conclude that by studying the importance of critical thinking in educating business students, it is possible to increase market understanding and decision-making competence for students. Critical thinking is the skills of business students to start a successful business. JEL codes: I 23, M 10

Keywords: critical thinking; information assessment; 21st century skills

Tetiana Hantsiuk, Khrystyna Vintoniv, Nataliia Opar, Bohdan Hryvnak (Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine)

Developing Intercultural Competence Through Design Thinking

Cultural competence, as the ability to interact effectively with the culturally diverse others, is a key component to your success in the globalized world. Developing cultural competence gives us an insight how to benefit from the diversity within intercultural interactions. Everyone may misinterpret the cultural differences due to the low level of cultural competence. That can influence further cooperation with different cultures.

That is why it is very important to foster students' intercultural skills, in particular by using different learning techniques and implementing new ideas into the traditional teaching methods. One of them is design thinking as a practice that encourages collaboration and can help students to manage intercultural challenges.

The purpose of the study is to summarize and synthesize the research on cross-cultural interactions and design thinking to build a framework that shows how the implementation of the design thinking method into the learning process facilitates the development of students' intercultural competence.

The tasks of the research are:

(a) to review the main contributions to the field of design thinking within the context of cross-cultural interactions by analysing multidisciplinary studies on both design thinking and intercultural competence;

(b) to reveal the correlation between the components of intercultural competence and the principles, elements, and stages of design thinking process;

(c) to observe the changes in the students' intercultural competence level by analysing learners' responses to the case of intercultural misunderstanding at the beginning of studying the cross-cultural communication classes and after finishing the course.

The study uses mixed approaches such as scientific literature studies, quantitative and qualitative data collection and analysis methods.

The results are presented in the framework that demonstrates the ways how design thinking method supports the development of intercultural competence. This framework can be used by educators to teach intercultural competence and anyone involved in cross-cultural interactions, and who would like to benefit from the diversity. *The paper is supported by the project: Competence Development of Lithuanian and Ukrainian Public Sector Employees using Design-Thinking Methodology (PubCom-DT) (Nr.S-LU-20-5)*

Keywords: cultural diversity, culture, design thinking, intercultural communication, intercultural competence.

Galyna Malynovska, Larysa Mosora, Sviatoslav Kis, Serhii Pobihun, Oleh Yatsiuk
(Ivano-Frankivsk National Technical University of Oil and Gas, Ukraine)

Using Design Thinking Method in Personnel Certification Procedures

One of the effective tools in the implementation of processes and procedures for human resources development of the organization is personnel certification. Businesses, institutions and organizations, by certifying their staff, aim to expand the capabilities of employees by acquiring new or improving existing knowledge, skills, abilities and experience to improve the efficiency and, in some cases, the safety of professional duties.

Providers of formal educational services in the field of personnel certification can be both public and private organizations. The main condition for their presence on the market should be a permit (accreditation, license, etc.), which certifies the possibility of training and certification and confirms that the staff of the institution has certified teachers-trainers.

Certification through non-formal education is a fairly common format for providing educational services in modern conditions, the services of which are actively used by both businesses and individuals. In this case, the main purpose of participating in a short-term curriculum, training, webinar, seminar, etc. is not to obtain a certificate, but to learn new or increase the level of mastery of previously acquired skills.

Given the above, the purpose of the paper is a theoretical and methodological justification, practical testing and evaluation of the effectiveness of the use of design thinking in personnel certification procedures.

Achieving the goal of the study is realized by setting and solving the following tasks:

- to explore the theoretical and methodological basis of design thinking, to establish opportunities and ways of its practical application to improve the implementation of human resources development processes of the organization;
- demonstrate the practical feasibility, stages and technology of using design thinking in the procedures of international certification of personnel of oil and gas companies;
- to develop and test an approach to evaluating the effectiveness of the application of design thinking in personnel certification procedures.

The project of the research envisages the analysis of the preparatory and final stage of the international certification of the personnel of oil and gas enterprises and the development of recommendations for their improvement with the use of design thinking. The study combines methods of quantitative and qualitative analysis. In particular, the tools of statistical analysis are used to study and objectively characterize the results of personnel certification, qualitative methods – to establish the intellectual, psychological and professional parameters of the person using prototyping tools. According to the results of the study it is expected to obtain:

- method of design thinking, adapted to solve problems of improving the implementation of human resources development processes of the organization;
- improved approach to the organization of personnel certification procedure based on the use of the prototyping tools;
- developed approach to evaluation of training results and personnel certification.

The paper is supported by the project: Competence Development of Lithuanian and Ukrainian Public Sector Employees using Design-Thinking Methodology (PubCom-DT) (Nr.S-LU-20-5)

Keywords: personnel certification, design thinking, human resources development, formal educational, non-formal education



18th International Conference
on European Processes

<https://icepconference.ktu.edu/>



23rd April, 2021, Kaunas

<https://icepconference.ktu.edu/>

SCIENTIFIC BOARD

Dr. Rasa Daugėlienė, Kaunas University of Technology, Lithuania

Dr. Eglė Butkevičienė, Kaunas University of Technology, Lithuania

Dr. Biruta Sloka, University of Latvia, Latvia

Dr. Pawel Mlodkowski, School of International Liberal Arts, Miyazaki International College, Miyazaki, Japan

Dr. Donata Jovarauskiene, Kaunas University of Technology, Lithuania

Dr. Raminta Pučėtaitė, Kaunas University of Technology, Lithuania

Dr. Jari Stenvall, Tampere University, Finland

Dr. Brigita Janiūnaitė, Kaunas University of Technology, Lithuania

Dr. Natalie Aleksandra Gurvits-Suits, Tallinn University of Technology, Estonia

Dr. Velga Vevere, EKA University of Applied Sciences, Latvia

Dr. Stanisław Umiński, University of Gdansk, Poland

Dr. Jelena Titko, EKA University of Applied Sciences, Latvia

Dr. Jiri Strouhal, Skoda Auto University Mlada Boleslav, The Czech Republic

Dr. Iveta Linina, Turība University, Latvia

Dr. Ieva Brence, RISEBA University of Applied Sciences, Latvia

Dr. Joanna Kuczevska, University of Gdansk, Poland

Dr. Janis Priede, University of Latvia, Latvia

23rd April, 2021,
Kaunas

2 0 2 1

I C E P

18th International Conference
on European Processes

ABSTRACTS