



ECONOMICS OF DIGITAL TRANSFORMATION

Artificial Intelligence and Productivity:
Challenges and Opportunities





19 - 22 June 2024 OPATIJA Hotel Ambasador

About EDT Conference

The 7th International Scientific Conference: Economics of Digital Transformation (EDT Conference 2024) is organised by the Faculty of Economics and Business of the University of Rijeka. The conference, which will take place both on-site in Opatija, Croatia, and online from 19 to 22 June 2024, will focus on the topic of "Artificial Intelligence and Productivity: Challenges and Opportunities"

Artificial intelligence (AI) takes centre stage and demonstrates its transformative impact on various facets of life, encompassing workplaces and daily routines. The conference aims to delve into the multifaceted landscape of AI and address challenges such as ethical considerations, workforce dynamics, security and legal frameworks. At the same time, it aims to highlight the tremendous opportunities of AI, such as improved efficiency, informed decision-making processes and personalised services.

Authors are invited to submit abstracts and full papers via the EDT conference website, following the guidelines outlined in the official Call for Papers. Submitted manuscripts will undergo a rigorous double-blind review process, with selected papers to be published prior to the conference. The English publications will be summarised in a conference proceedings intended for indexing in the Clarivate CPCI (WoS) index and are expected to be published in October 2024.

Outstanding contributions to the conference will be evaluated for inclusion in the Proceedings of the Rijeka Faculty of Economics: Journal of Economics and Business, as well as for possible publication in selected international journals (to be announced), which will be abstracted and indexed in the Web of Science (WoS) database

Organisers

The mission of the Faculty of Economics and Business is to educate entrepreneurial and socially responsible leaders and to contribute to the advancement of science at an international level. The vision of our faculty is to be recognised as a socially responsible and desirable university through continuous development and to serve as a community partner in promoting a sustainable society.

Our core values are responsibility, excellence, connectivity, partnership and sustainability. The first step on the path to a career is gaining work experience during your studies. Our faculty co-operates with successful companies throughout Croatia and enables our students to combine theory and practise. Through memberships in international institutions, our students have the opportunity to choose multinational companies where they can gain experience according to their interests and ambitions.

Social responsibility is a central element of our community involvement. We initiate projects that promote positive change and transform perspectives in our society and beyond. We are the first higher education institution in Central and Eastern Europe to calculate its carbon footprint in order to reduce greenhouse gas emissions and mitigate climate change. With this initiative, we are paving the way for other companies in our region to follow suit.

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University of Rijeka, Center for Support to Smart and Sustainable
Cities

Conference Speakers



Darjan Budimir
CEO of Croatian Energy
Market Operator



Saša Čegar Assistant Professor, Faculty of Economics and Business, University of Rijeka



Marko Ćirović

Assistant Professor, Faculty
of Organizational Sciences,
University of Belgrade



Martina Dragičević
Director of Regulatory Affairs
and EU Funding Department
at A1 Croatia



Saša DrezgićDean, Faculty of Economics
and Business, University of
Rijeka



Marko Filipović Mayor of the City of Rijeka



BJ Fletcher

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Public Management and
Policy, University of Illinois
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Catherine Gall

Executive Director of the ETI
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Ivan Gržeta

Assistant Professor, Faculty
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University of Rijeka



Edward (Ned) Hill
Professor, John Glenn College
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Knowlton College of
Architecture, The Ohio State
University



Dražen JakšićHead of Energy Institute
Hrvoje Požar



Lara Jelenc
Professor, Faculty of
Economics and Business,
University of Rijeka



Christian Ketels
Professor, Harvard Business
School



Kristina Đukić

Deputy Mayor
City of Opatija



Nicos Komninos

Professor, Aristotle University
of Thessaloniki



Tomasz KozlukEconomic Counsellor to the
Chief Economist, OECD



Conference Speakers



Boris Miljavac
CEO of Siemens Energy



Carlos Moreno
Professor, IAE Paris Business
School



Peter Nijkamp
Professor, Vrije Universiteit,
Amsterdam



Predrag Pale

Associate Professor, Faculty of Electrical Engineering and Computing, University of Zagreb



Vedran Kružić
Director at Regional
Development Agency Primorje
Gorski kotar



Dragan VukmirovićProfessor, Faculty of
Organizational Sciences,
University of Belgrade



Carlo Ratti
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and the Politecnico di Milano



Carlo Sessa

Member of the Executive
Board of the EuroMediterranean Economists
Association (EMEA)



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Economics, University of Niš



Alan F. Unger
President
Unger Family Foundation



Nela Vlahinić
Professor, Faculty of
Economics and Business,
University of Rijeka



Karima Kourtit
Executive Director TRSA

Agenda

9.00 <i>-</i> 10.00	Vednesday, Registration	, June 17th	Online link
10.00 - 10.30	Opening and conference greetings	Saša Drezgić, Dean of the Faculty of Economics and Business, Rijeka Kristina Đukić, Deputy Mayor of the City of Opatija Marko Filipović, Mayor of the City of Rijeka Vedran Kružić, Director of Regional Development Agency of the Primorje-Gorski Kotar County	Grand Hall, Hotel Ambasador
10.30 - 12.00	Plenary session	Keynote speakers: Peter Nijkamp The Regional Science Academy (TRSA), Vice-President, Alexandru Ioan Cuza University of Iasi/ VU University Amsterdam "'Societal Benefits of AI" Tomasz Kozluk, OECD, Economic Counsellor to the Chief Economist "The impact of Artificial Intelligence on productivity, distribution and growth: Key mechanisms, initial evidence and policy challenges"	Grand Hall, Hotel Ambasador
12.00 - 12.30		Coffee break	
12.30 - 13.30	PANELI	Chair: Nela Vlahinić , Full Professor Faculty of Economics and Business, University of Rijeka	Grand Hall, Hotel Ambasador
	New Technologies for Green Transition	Panelists: Boris Miljavac, Siemens Energy, CEO Darjan Budimir, HROTE, CEO Dražen Jakšić, Head of Energy Institute Hrvoje Požar Martina Dragičević, Director of Regulatory Affairs and EU Funding Department at A1 Croatia	
	panellists will expl transformative po role in reshaping response of electr and challenges. Fi	cocus on the technological innovations that are driving the glore emerging trends in low-carbon technologies and provide tential. The topic will also highlight the promising field of greathe global energy landscape. In addition, panellists will deficitly markets to these ground-breaking advances, revealing anally, the discussion will also cover important considerations to in the age of digitalisation.	e insights into their een hydrogen and its discuss the dynamic g both opportunities
3.30 - 15.00		Lunch	



DAY1 Wednesday, June 19th

Online link

15.00 - 16.30

PANEL II

Chair: Karima Kourtit, Executive Director TRSA

Shaping Economic

Keynote speakers:

Strategies for a Transformative

Christian Ketels, TRSA Great Minds in Regional Science Lecture.

"The Scientific Significance of Michael Porter"

Future – Inspiration

from Michael Porter Peter Nijkamp, Vice-President of TRSA, Alexandru Ioan Cuza

University of Iasi/VU University Amsterdam, and **Karima Kourtit**, Executive Director TRSA, in association with **Paul Krugman** and

(in cooperation with The Regional Science Academy - TRSA)

Carlos Moreno

"Old Wisdom and the New Economic Geography: Managing

Uncertainty in 21st Century Regional and Urban Development

Michael Porter

Moderators: Saša Drezgić and Karima Kourtit

Grand Hall, Hotel Ambasador

Roundtable Discussion

Panelists:

Christian Ketels, Principal Associate at Prof. Michael Porter's Reimagining

Institute for Strategy and Competitiveness

Economics: Peter Niikamp Professor of Economics

nomics: Peter Nijkamp, Professor of Economics, VU University,

What Next? Amsterdam

Catherine Gall, Executive Director of the Sorbonne based ETI

Research

Lara Jelenc, Full Professor at Faculty of Economics and Business,

University of Rijeka

By emphasizing the role of location-specific factors, such as factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry, Porter's work has helped geographers and policymakers better understand the dynamics of regional economies.

Many regional economics and geographers recognize the importance of considering both external and internal factors in shaping regional economic development, and Porter's frameworks have provided a useful lens through which to analyze these dynamics. Porter's theories emphasize the importance of geographic clusters and agglomerations in driving regional competitiveness.

His work is essentially connected to the 'New Economic Geography', especially in the context of industrial location theory and policy. Furthermore, Porter's concept of the 'cluster effect' suggests that industries tend to agglomerate in specific geographic areas due to shared resources, specialized labor pools, and knowledge spillovers.

The 15-minute city concept, popularized by urban planner Carlos Moreno, envisions urban environments where residents can access all their daily needs, such as work, shopping, education, and recreation, within a 15-minute walk or bike ride from their homes. Porter's emphasis on factors that contribute to regional competitiveness, such as infrastructure, workforce skills, and institutional support, can also inform the development of 15-minute cities. Efficient transportation networks, quality public spaces, and inclusive urban governance are essential components of a 15-minute city that supports economic activity and social well-being.



DAY1 Wednesday, June 19th

Online link

15.20 - 15.30	CROSS-disciplinary network for research excellence in	Welcome speech Saša Drezgić & Saša Čegar, EFRI	
	Regenerative Economy Innovation	Presentation of DEC plan	
	eco-Systems	Marija Džunić, FEUN	
			Lovor Hall
15.30 - 15.50		Presentation of Quality Assurance Plan	
	Project partners'	POLIEDRA+POLIMI, TBD	
	semi-annual	Presentation of Data Management Plan	
15.50 - 16.10	meeting	OSLOMET, TBD	
16.10 - 16.30	CROSS () REIS Funded by the European Union	Forthcoming info days — Protocol and experience of UOM EMEA , UOM , and FEUN , TBD	
16.30 - 17.00	UNIVERSITY OF PLEXA CONTRIBUTE TO SUPPORT TO SUPPRINCE CITES CROSTEISS.COM	Update of the Action plan: January 2025 – June 2025 Jelena Stanković, FEUN, Project Coordinator	
17.00 - 18.00		Discussion	

DAY1 Wednesday, June 19th

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SESSION I

Moderator: Barbara Fajdetić, Faculty of Economics and Business, University of

Rijeka

16.30 - 18.45

Mimosa Hall 1

Adrijana Martinović, University of Rijeka, Faculty of Law; Inter-University Centre of

Excellence Opatija

Automated decision-making and algorithmic management: Implications of the

Fiscal Policy,

CJEU's SCHUFA (scoring) case for the EU labour law

Public

Giuseppina Agata Di Guardo, University G. Marconi, School of Law

Administration

Francesco Gaspari, University G. Marconi, School of Law

and

Circulation and protection of genetic data and biobanks: legal challenges and

Regulation

regulatory perspectives

Economics

Robert Matić, Maroni, d.o.o.

Alemka Šegota, Faculty of Economics and Business, University of Rijeka **Helena Blažić Pečarić**, Faculty of Economics and Business, University of Rijeka

Is Primorje-Gorski Kotar County Efficient in Fiscal Terms?

Marija Bečić, Department of Economics and Business, University of Dubrovnik

Perica Vojinić, Department of Economics and Business, University of Dubrovnik

Matea Matić Šošić, Department of Economics and Business, University of Dubrovnik

The Role of E- Government in Economic Growth

Martina Corbino, University G. Marconi, School of Law

Digital transformation of the Public Administration: between efficiency and

innovation

DAY 2	Thursday,	June 20th	Online link
	Plenary session	Chair: Catherine Gall and Karima Kourtit	
	The X-minute	Keynote speakers:	
	city: Promise or Myth on a Livable Planet	Carlos Moreno, Scientific Director of the research lab "Entrepreneurship Territory Innovation" at the IAE Paris-Sorbonne, Université Paris 1 Panthéon-Sorbonne "15-Minute City: Urban Intelligence, Sustainability & Resilience"	
10.00 - 12.00		Carlo Ratti, Senseable City Lab, Department of Urban Studies and Planning, MIT	
		"City Revolution: The 15-Minute Senseable Transformation"	
		Karima Kourtit, Open University the Netherlands and Peter Nijkamp, Alexandru Ioan Cuza University of Iasi/ VU University Amsterdam	
		"City Love: The New Economic Proximity"	Grand Hall, Hotel
	DANELIII	Roundtable Warming Up:	Ambasador
	PANEL III	Nicos Komninos, professor of Urban Development and Innovation Policy at the Aristotle University of Thessaloniki	
	Decoding	"Spatial Intelligence & Smart Environment Challenges"	
	Resilience, Sustainability	Moderators: Saša Drezgić and Catherine Gall	
	and	Panelists:	
	Efficiency	Karima Kourtit, Executive Director TRSA Carlos Moreno, Associate Professor at the Paris IAE —	
		Panthéon Sorbonne University in France Carlo Ratti, Professor, Senseable City Lab, Department of	
		Urban Studies and Planning, MIT Nicos Komninos, Professor of Urban Development and	
		Innovation Policy at the Aristotle University of Thessaloniki	
12.00 - 12.30		Coffee break	



DAY 2	Thursday,	June 20th	Online link
	PANEL IV		
12.30 - 13.30	Empowering Long-Term Urban Resilience and Prosperity: Fostering A Regenerative Economy in European Cities - CROSS-REIS EDITION	Moderator: Marko Ćirović, Assistant Professor, Faculty of Organizational Sciences, University of Belgrade Panelists: Carlo Sessa, Euro-Mediterranean Economists Association Jelena Stanković, Faculty of Economics, University of Niš Saša Čegar, Faculty of Economics and Business, University of Rijeka CROSS PEIS Crosreiss.com	Grand Hall, Hotel Ambasador
In the face of challenges such as climate change, urbanization and economic inecregenerative economy offers innovative approaches that promote sustainability, inclusion long-term prosperity in urban areas. The concept of the regenerative economy represent dynamic, comprehensive, and forward-looking approach to sustainability that has the postering about a more profound and transformative change towards a more regenerative and urban space than conventional approaches to sustainability development. Therefore, this discuss key strategies to strengthen long-term urban resilience and prosperity by corregenerative economy in European cities.			
13.30 - 15.00		Lunch	
15.00 - 16.15	PANEL V Unger Family Foundation Panel: The impact of AI technology on government, industry, and academia	Moderator: Molly Schnoke, Director, Center for Economic Development Maxine Goodman, Levin School of Urban Affairs Levin College of Urban Affairs and Education, Cleveland State University Panelists: B.J. Fletcher, Assistant Professor, School of Public Management and Policy, College of Public Affairs and Education University of Illinois Springfield Ivan Gržeta, Assistant Professor, Faculty of Economics and Business, University of Rijeka Edward (Ned) Hill, Professor, John Glenn College of Public Affairs and The Knowlton College of Architecture, The Ohio State University Predrag Pale, Associate Professor, Faculty of Electrical Engineering and Computing, University of Zagreb Dragan Vukmirović, Professor, Faculty of Organizational Sciences, University of Belgrade	, Grand Hall, Hotel Ambasador

DAY 2 Thursday, June 20th

Online link

The advent of Artificial Intelligence (AI) technology has heralded a transformative era across various spheres of society, encompassing government, industry, and academia. This panel aims to delve into the multifaceted impacts of AI on these sectors, elucidating both the opportunities presented and the challenges encountered. In the governmental realm, AI technologies are reshaping public service delivery, enhancing efficiency, and facilitating more informed policymaking through data-driven insights. However, this surge in AI utilization also raises significant concerns regarding privacy, equity, security, and ethical governance, necessitating robust frameworks to ensure responsible usage. Within the industry, AI is a double-edged sword, driving innovation and economic growth while also disrupting traditional business models and labor markets. Academically, AI is revolutionizing research methodologies and educational paradigms, offering unprecedented opportunities for personalized learning, knowledge discovery, and interdisciplinary collaboration. Nonetheless, the rapid pace of AI development poses challenges in aligning academic curricula with industry demands and ethical considerations, urging educational institutions to integrate AI literacy and ethical training into their programs.

15.10 - 15.30 15.30 - 15.50	CROSS-disciplinary network for research excellence in Regenerative Economy Innovation eco-Systems	Presentation of EFRI Career Center Presentation of EFRI Center for Local Economic Development	Lovor Hall
15.50 - 16.10 16.10 -16.30 16.30 - 16.50 16.50 - 17.10 17.10 - 17.40	Presentation of EFRI infrastructure, projects and cooperation potentials CROSS REIS Funded by the European Union Control of BURNAL CHIES CROSSION CONTROL OF BURNAL CROSSION CONTROL O	Presentation of EFRI Center for Health Economics and Pharmacoeconomics Presentation of EFRI Economic Forum Presentation of EFRI projects and research infrastructure Presentation of EFRI Journal Discussion	

DAY 2 Thursday, June 20th

	Online link	Moderator: Ivana Dvorski Lacković, Faculty of organization and informatics, Department of Economics, University of Zagreb
16.30 - 18.30	SESSION II Mimosa Hall 1	Jordancho Sherovski, School of Economics and Business, University of Ljubljana Mojca Indihar Štemberger, School of Economics and Business, University of Ljubljana Why, how, and when digital transformation of public healthcare works
	Impacts of Digitalisation and Innovations in Economic Development	Amna Aščić-Kubat, Walgreens Boots Alliance, St. Louis Amila Pilav-Velic, School of Economics and Business, University of Sarajevo Aziz Šunje, School of Economics and Business, University of Sarajevo Acquisition of knowledge from external sources and production innovativeness of companies: quantile regression analysis Sonja Ivančević, Faculty of Organizational Sciences, University of Belgrade Veljko Dmitrović, Faculty of Organizational Sciences, University of Belgrade Marko Ćirović, Faculty of Organizational Sciences, University of Belgrade Nataša Petrović, Faculty of Organizational Sciences, University of Belgrade Academic Burnout of Digital Natives and Social Sustainability: Prevalence and Risk Factors
		Stergios Symeonidis, Optimal – Human Reinforced, Athens Nikolaos Dimitriadis, University of York Europe Campus, City College, Thessaloniki Marko Ćirović, Faculty of Organizational Sciences, University of Belgrade Matteo Venerucci, Department of Applied Research, Tobii, Danderyd Municipality, Sweden The eyes are the windows to the brain": Pupillometry and Eye Fixations Patterns in Smartphone Product Communications
		Ivana Dvorski Lacković, Faculty of organization and informatics, Department of Economics, University of Zagreb Patricija Lovasić, Faculty of organization and informatics, Department of Economics, University of Zagreb Students' attitudes and perceptions on virtual influencer
		Dijana Vuković, University North, Varaždin Sara Slamić Tarade, Zagreb University of Applied Science Ivan Tolić, Business Polytechnic Zagreb Investigating Consumer Sentiment and Ratings of Sports Footwear Features
		Jelena J. Stanković, University of Niš, Faculty of Economics Marija Džunić, University of Niš, Faculty of Economics Ivana Marjanović, University of Niš, Faculty of Economics Marina Stanojević, University of Niš, Faculty of Economics Measuring Circular Economy Success in the EU: Policy Recommendations
16.00 - 20.00		Second Scientific Colloquium for EFRI doctoral students Mimosa Hall 2
20.00		GALA DINNER

DAY 3 Friday, June 21th

10.00 - 11.45	Doctoral Conference	Doctoral Conference for doctoral students of The joint PhD programme Governance and Economics in the Public Sector Mimosa Hall 2
	Online link	Moderator: Ana Kićanović , Faculty of Organizational Sciences, University of Belgrade
	SESSION III	Ana Kićanović, Faculty of Organizational Sciences, University of Belgrade Stefan Komazec, Faculty of Organizational Sciences, University of Belgrade
11.00 - 13.30	Mimosa Hall 1	Milica Maričić, Faculty of Organizational Sciences, University of Belgrade Employees' turnover intention driven by the adoption of artificial intelligence in
	Artificial	the workplace
	Intelligence and Industry 4.0	Veljko Uskokovic, Faculty of Organizational Sciences, University of Belgrade Milica Maričić, Faculty of Organizational Sciences, University of Belgrade Aleksandra Dacic-Pilcevic, European Medicines Agency Veljko Jeremić, Faculty of Organizational Sciences, University of Belgrade
		Navigating the Landscape: Unveiling the Reflection of AI in the Sharing Economy through Bibliometric-based Analysis
		Tonći Svilokos, University of Dubrovnik Mario Bilić, University of Dubrovnik
		Iris Lončar, University of Dubrovnik A Comprehensive Review of Artificial Intelligence Applications in the Financial Sector
		Primož Pevcin, Faculty of Public Administration, University of Ljubljana Katja Debelak, Faculty of Public Administration, University of Ljubljana Artificial Intelligence and Public Management: A Systematic Literature Review of the Prevailing Directions of Research
	Online link	
	SESSION IV	Moderator: Lara Jelenc, Faculty of Economics and Business, University of Rijeka
11.00 - 13.30	Lovor Hall	Milica Latinovic, Faculty of Organizational Sciences, University of Belgrade Sladjana Benkovic, Faculty of Organizational Sciences, University of Belgrade Bojana Olgić Draženović, Faculty of Economics and Business, University of Rijeka Cleantech Crowdfunding
	Contemporary	Agnes-Ildiko Wittrich, Faculty of Management, Comenius University Bratislava
	Management, Organization	The Project Manager of the Future — Will the role continue to exist?
	and Marketing Issues	Lara Jelenc, Faculty of Economics and Business, University of Rijeka Connecting the Dots in Lean Implementation- Insights from Qualitative Data Analysis in Croatian Lean Companies
		Željka Marčinko Trkulja, Libertas International University, Zagreb

Dinko Primorac, University North, Koprivnica

Investing in Customer Loyalty Programs: Simulating costs in defensive strategies

Irena Bilić, University Algebra

DAY3 F	riday, June	e 21th	
13.30 - 15.00		Lunch	
11.45 - 16.00	Doctoral Conference	Doctoral Conference for EFRI doctoral students	Mimosa Hall 2

DAY 4 Saturday, June 22th

TRIP - TBA

BOOK OF ABSTRACTS

SESSION 1

Wednesday, June 19th

Fiscal Policy, Public Administration and Regulation Economics

Adrijana Martinović, University of Rijeka, Faculty of Law; Inter-University Centre of Excellence Opatija

Automated decision-making and algorithmic management: Implications of the CJEU's SCHUFA (scoring) case for the EU labour law

Praised by many as a landmark ruling with wider impact on Al-powered automated decision-making systems across sectors, and equally criticised for creating systemic fissures in the GDPR framework, the recent judgment by the Court of Justice of the European Union in SCHUFA (scoring) case (C-634/21) concerning interpretation of Article 22(1) GDPR deserves to be scrutinised in light of its potential implications for the EU labour law and the regulation of algorithmic management practices. Employers increasingly rely on automated systems to support or fully automate their management decisions. The use of automated decision-making systems in the recruitment and/or employment context largely falls back on the general data protection rules. However, there are limits, ambiguities, and potential gaps regarding their application that could undermine the workers' protection, and bring into question regulatory compliance. The emerging EU legislation, such as the proposed Platform Work Directive (COM(2021) 762), aims to provide specific obligations concerning algorithmic management. Even if this legislation is passed, it will apply only in the context of platform work, and not in 'traditional' employment, which could result in different levels of protection. The question about the nature and scope of Article 22 GDPR in the employment context therefore remains relevant. This paper will critically evaluate the findings from the SCHUFA (scoring) case and explore their impact on the current and future regulation of algorithmic management. The aim is to propose workable solutions that harness the benefits of legitimate algorithmic management practices, while safeguarding the workers' rights in the AI-driven world of work.

Keywords: algorithmic management; automated decision-making; EU labour law; Artificial Intelligence Act; Platform Work Directive



Giuseppina Agata Di Guardo, University G. Marconi, School of Law **Francesco Gaspari**, University G. Marconi, School of Law

Circulation and protection of genetic data and biobanks: legal challenges and regulatory perspectives

Globalisation and the so-called information society are having a growing impact on the lives and activities of citizens. From this perspective, e-health takes on a particular importance in the context of digitalisation processes, and indeed a considerable amount of data has been collected in the health sector in recent years. In particular, with regard to genetic data, the use of ITC and AI, inter alia, are revolutionising the field of personalised medicine, making it possible to customise medical therapies based on a patient's genetic profile. However, there are numerous technical and legal challenges in this area, as well as ethical issues that require careful consideration. The first part of the paper focuses specifically on genetic data and biobanks, their multi-layered legal regime, with particular reference to the collection of that data, their circulation and protection. The second part aims to draw a picture of the state of the art of biobanks, focusing on the recent Italian experience (the SharDna case), showing new demands affecting fundamental rights, that regulators and legislators are called to handle and regulate. The paper concludes that a market in genetic data and biobanks is legally inconceivable, but makes some suggestions on how to address and manage new challenges, posed by the circulation of data. Configuration of genetic data and biobanks as global commons or genetic commons could be a solution, as they affect human dignity and cannot be considered a marketable commodity.

Keywords: E-health, Genetic data regulation, Biobanks regulation, Secondary uses of biobanks, Circulation of genetic data, SharDna.

Robert Matić, Maroni, d.o.o.

Alemka Šegota, University of Rijeka, Faculty of Economics and Business

Helena Blažić Pečarić, University of Rijeka, Faculty of Economics and Business

Is Primorje-Gorski Kotar County Efficient in Fiscal Terms?

Fiscal decentralization, if properly implemented, leads to greater efficiency. However, the efficiency of subnational entities may vary due to their inherent differences as well as the fiscal policies applied. The purpose of this research is to assess the efficiency at the county level in the Republic of Croatia using the example of Primorje-Gorski Kotar County. The first objective is to compare it with the Croatian average (for counties) and comparable coastal counties using relevant indicators of fiscal decentralization. The second objective is to compare Primorje-Gorski Kotar County with other relevant counties by applying Data Envelopment Analysis (DEA) using categorical variables. The analysis is conducted for the entire counties (including the cities and municipalities on its territory). The results confirm Primorje-Gorski Kotar County being efficient for the selected combination of fiscal and tourism inputs and GDP as output during the period of 2015-2019.

Keywords: fiscal decentralization, counties, Primorje-Gorski Kotar County, efficiency, data envelopment analysis (DEA)

Marija Bečić, Department of Economics and Business, University of Dubrovnik

Perica Vojinić, Department of Economics and Business, University of Dubrovnik

Matea Matić Šošić, Department of Economics and Business, University of Dubrovnik

The Role of E- Government in Economic Growth

In recent decades, a trend that has changed the way governments and companies operate is the development and implementation of information and communication technologies. The term egovernment refers to the digitalisation of the public sector and administration, which includes the use of information and communication technologies in the daily work of public administration. E-government also includes interaction between different government bodies, implementation of administrative processes through online platforms and digital channels, etc. Digitalisation of the public sector can affect economic growth through several channels. By eliminating unnecessary paperwork and manual processes, egovernment can save time and resources, both for itself and for the rest of the economy. Due to greater transparency and easier access to information, citizens and companies can monitor government actions, and get information about policies or public expenditures more efficiently. As a result, there may be a reduction in corruption and increase in private sector investments, which ultimately supports economic growth. The aim of this paper is to investigate the relationship between the application of information and communication technologies in the public sector (e-government) and economic growth. A panel data comprising 11 countries of Central and Eastern Europe is used for the period from 2012 to 2022. For this purpose, data are taken from Eurostat and UN databases. Given the structure of the available macroeconomic data, we apply panel data modelling. Research results suggest that components of egovernment index, especially online services and telecommunication infrastructure positively affect GDP growth and productivity in analysed countries.

Keywords: CEECs, economic growth, e-government

Martina Corbino, University G. Marconi, School of Law

Digital transformation of the Public Administration: between efficiency and innovation

The topic of automation, computerisation or digitalisation of the Public Administration has been at the centre of legislative interventions over the last few decades. It is becoming even more relevant following the commitments made by all E.U. member States and, in particular, by the Italian Government within the so-called Next Generation E.U. (N.R.R.P.) to complete digital transition. A fundamentally important aspect is constituted by the implications that the digital transition process has involved, and will involve, on the activities of the Public Administration, also considering the constitutional principles, as well as those of E.U. derivation. In particular, the phenomenon to be analysed in all its implications, both positive and negative, is the use of algorithms in administrative processes, aimed at producing an administrative act. The algorithmic rule will be analysed not only for its aspects relating to the protection of the constitutional principles of the proper functioning of the administration, but also in relation to the activity performed by civil servants. On one hand, they will be relieved of sometimes alienating tasks and duties, but on the other hand, they will require adequate training in the use of these tools and the necessary coordination with their work duties, in order to ensure proper productivity. The aim of the research is to analyse the degree of efficiency that digitisation can bring to the activities of the Public Administration, also through the analysis of concrete cases, in relation to both the external user, i.e. the citizen who benefits from services and performances, and to the internal user, i.e. the civil servant who provides services and performances.

Keywords: digitisation, algorithm, productivity, civil servant, external user

SESSION 2

Thursday, June 20th

Impacts of Digitalisation and Innovations in Economic Development

Jordancho Sherovski, School of Economics and Business, University of Ljubljana, Ljubljana, Republic of Slovenia

Mojca Indihar Štemberger, School of Economics and Business, University of Ljubljana, Ljubljana, Republic of Slovenia

Why, how, and when digital transformation of public healthcare works

This paper argues that elucidating the success factors of the digital transformation of public healthcare requires a contextualized analysis anchored in three foundations. Firstly, public healthcare is a highly formalized institution governed by specific rules and norms that simultaneously shape and constrain the performative behavior of all participants, as suggested by institutional theory. Secondly, attempting to introduce changes within such restrictions is likely to fail unless driven by public exigency, as described by public values theory. Thirdly, when such urgency arises, public healthcare organizations utilize their internal and external competencies to respond to the emerging impetus for change, as posited by dynamic capabilities theory. Building on this synthesized theoretical premise and supported by insights from four case studies, the presented research explores the complexities that contour the substratum for achieving a successful digital transformation of public healthcare. It offers a comprehensive overview of how, why, and when it can happen. Empirical findings confirm the validity of the proposed theory synthesis and enable the identification of the success factors. In this regard, continuous evaluation of the realization of public values through comprehensive democratic engagement, including open deliberation and discussion, constitutes a first step on the road to success. Additionally, an appropriate regulatory framework, in conjunction with active image management and effective governance, is essential. Finally, the digital culture and skills of both the healthcare professionals delivering services through the existing IT infrastructure and the patients utilizing these services ultimately determine the outcome of the transformation effort.

Keywords: public healthcare, digital transformation, success factors, conceptual framework

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Acquisition of knowledge from external sources and production innovativeness of companies: quantile regression analysis

Access to external sources of knowledge is extremely important for companies in today's dynamic environment in which they operate. Acquisition of external knowledge contributes to the improvement of the company's innovative performance and the achievement of a competitive advantage on the market. The objective of this research is to test the contribution of acquiring knowledge from external sources to the product innovativeness in the company, by estimating the regression model for different quantiles. Therefore, this study provides an answer to the question is there a difference in the contribution of different sources of knowledge in low, medium and high performing companies regarding to product innovation. The purpose of researching this topic is reflected in the fact that knowledge, as a key resource of companies in the new economy, is often unavailable within the company itself. For this reason, it is necessary to adopt it outside the company in order to achieve a higher level of product innovativeness. The research was conducted on a sample of 203 companies operating on the territory of Bosnia and Herzegovina. The main findings of this study identified customers, universities, suppliers and consultants as external sources of knowledge that significantly contribute to the company's product innovativeness. The main conclusion of this study is that acquisition of external knowledge represents a way in which companies can improve their product innovativeness and thereby achieve a sustainable competitive advantage on the market.

Keywords: knowledge acquisition, external knowledge sources, production innovativeness, quantile regression analysis

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Academic Burnout of Digital Natives and Social Sustainability: Prevalence and Risk Factors

As higher education institutions play a key role in setting a foundation for a sustainable and resilient workforce, it is their responsibility to create an environment in which students' overall well-being will be preserved. In this regard, contemporary universities encounter a significant challenge - the increasing presence of academic burnout syndrome. The syndrome is shown to seriously deteriorate students' psychological, physical, and emotional health, and to negatively affect their career preparedness, as well as their subsequent performance, and progress in the workplace. However, considering the differences between generations discovered in prior burnout research, it becomes imperative to understand the specific dynamics of burnout experienced by the under-examined Generation Z, the first cohort of true digital natives, who constitute the current student population. Therefore, this study aims to determine whether and to what extent the representatives of Generation Z in Serbia experience burnout and to identify the risk factors contributing to its occurrence. The study is conducted on a sample of students from the University of Belgrade – Faculty of Organizational Sciences, Serbia, and the Copenhagen Burnout Inventory - student version (CBI-S) is used to measure academic burnout. Through analyzing the collected data, the study depicts the prevalence of burnout within Generation Z and outlines the demographic and situational variables associated with it. The findings of the study may serve as guidelines for the development of targeted interventions aimed at academic burnout prevention and reduction.

Keywords: academic burnout, digital natives, prevalence, risk factors, sustainability

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Students' attitudes and perceptions about virtual influencers

Virtual influencers represent a relatively new and growing phenomenon in the sphere of digital marketing and digital business. They present a mixture of technology, marketing strategy and creativity and are used in order to communicate with the target public and promote ideas, products and services. Using virtual influencing offers both opportunities and challenges for companies. In order to use virtual influencing successfully, it is crucial to understand customers' habits, attitudes and perceptions related to virtual influencers. Our main assumption is that younger generations are more exposed to and interested in virtual influencers. Therefore, we conducted a research on a sample of 102 Croatian students by using online survey. We analyze respondents' habits related to virtual influencing in terms of frequency of following and acquittance with certain virtual influencers, content type and preferred social network used for following. Students' attitudes and perceptions are analyzed through rating virtual influencers' content quality, authenticity and honesty, transparency, trust in the information they provide, as well as having impact on buying decisions. Students were also given the possibility to express their opinions related to the topics they consider relevant to be present in virtual influencing and what they expect from it in the future. The results indicate that students care about the topics of ecology, ethics, product quality, gender equality and authenticity of virtual influencers and that when companies are creating virtual influencing strategy these elements should be considered for younger generation of customers.

Keywords: virtual influencers, students, perceptions, attitudes

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"The eyes are the windows to the brain": Pupillometry and Eye Fixations Patterns in Smartphone Product Communications

Monitoring eye movement has been proven crucial for understanding consumer behaviour, and pupillometry can indicate whether or not the stimuli create a lot of confusion to the brain. This research examined the impact that smartphone promotional messages have on the brain's cognitive demands and analysed the visual attention that those received. Under the scope of neuromarketing it explored the smartphone industry and its advertising impact on Greek customers and on their mental workload levels through pupil dilation. An eye tracking device with a comparative questionnaire were used to investigate these topics, with their results from a final sample of 31 people (17 female and 14 male) agreeing with a large body of the pre-existing literature which suggests that, although men and women might have slightly different approaches on this product category, they mostly have similar biometric results. The stimuli included 10 images containing promotional content from 5 brands (Sony, Apple, Realme, Xiaomi, Samsung). After the detailed analysis of the eye tracking results that included fixation and pupil metrics and their comparison with the correlated literature, the study concluded that the appearance of the smartphone is the element that attracts the customers' visual attention the most and that the tested material generally did not demand considerable high amounts of mental workload to be processed. Eventually, it highlighted the importance of implementing a combination of implicit and explicit research methods to get a holistic view about the impact of product advertising on visual attention and mental effort, alongside other several academic and practical implications.

Keywords: product advertising, eye tracking, mental effort, visual attention, pupil dilation

Dijana Vuković, University of the North, Department of Business Economics **Sara Slamić Tarade**, Zagreb University of Applied Sciences **Ivan Tolić**, Business Polytechnic Zagreb

Investigating Consumer Sentiment and Ratings of Sports Footwear Features

The research objective of this paper is to determine the characteristics of sports shoe models from the two major competing brands, Adidas and Nike. The focus is on selected collections of men's and women's sneakers from both brands, based on a data set that includes model names, feature descriptions, average consumer ratings, and the corresponding number of consumer reviews. The textual feature descriptions are analyzed using Natural Language Processing (NLP) techniques such as topic modeling and TF-IDF frequency analysis. Additionally, sentiment analysis is performed based on positive and negative consumer ratings and descriptions of sports shoe characteristics, will be conducted to gain insights into user satisfaction. The topic modeling technique is based on the unsupervised latent Dirichlet method (LDA), which enables the identification of latent topics in text content. In the context of sports footwear, this method can uncover key themes such as design aspects, material composition or performance characteristics, enabling a nuanced understanding of the features highlighted in the descriptions. A quantitative statistical analysis is conducted to test hypotheses about possible differences in the ratings of men's and women's tennis shoes both for individual brands and between them. This research contributes to a deeper understanding of the competitive landscape of the Adidas and Nike brands in the sports footwear industry and provides valuable insights that can be used to improve marketing strategies.

Keywords: Characteristic of footwear, NLP analysis, Marketing strategies, Sport brands, Consumer opinions

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Measuring Circular Economy Success in the EU: Policy Recommendations

This paper aims to investigate the multifaceted domain of measuring circular economy success within the European Union, presenting a comprehensive analysis of current metrics and proposing refined policy recommendations. The circular economy, a paradigm aimed at minimizing waste and maximizing resource efficiency, has gained significant traction in EU policy frameworks. However, the measurement of its success remains complex and often fragmented. This research identifies key indicators used across various EU member states, evaluating their effectiveness and alignment with overarching sustainability goals. Through an extensive review of existing literature, policy documents, and empirical data, the study highlights gaps and inconsistencies in current measurement approaches. It also explores best practices from leading nations in circular economy implementation, offering insights into their success factors. Based on these findings, the paper proposes an approach for measuring effectiveness of circular economy practices on the example of EU countries. Furthermore, it outlines strategic policy recommendations aimed at enhancing circular economy performance. By addressing this critical area, the research aims to contribute to more accurate and actionable insights into the EU's progress towards a circular economy, ultimately guiding policymakers in making informed, impactful decisions.

Keywords: circular economy, resource efficiency, EU policy

SESSION 3

Friday, June 21th

Artificial Intelligence and Industry 4.0

Ana Kićanović, Faculty of Organizational Sciences, University of Belgrade **Stefan Komazec**, Faculty of Organizational Sciences, University of Belgrade **Milica Maričić**, Faculty of Organizational Sciences, University of Belgrade

Employees' turnover intention driven by the adoption of artificial intelligence in the workplace

In recent years, automation, digitalisation, and Artificial Intelligence (AI) have been key drivers of workplace transformation. Introducing AI at the workplace reduces the obligation of hard, repetitive and discouraging work, improves the work process's efficiency, and increases workers' longevity and comfort. At the same time, these changes might lead to dehumanisation, high cost of implementation, upskilling and reskilling, data-privacy issues and most importantly, downsizing. The aspect we tackle in this research is the workforce turnover intention due to AI adoption at the workplace. To provide insights on the defined relationship, we propose a conceptual model based on the OECD research on the impact of AI on the workplace and turnover intention scale previously used in the literature. To collect the data on which we tested the proposed model, we constructed a questionnaire and distributed it online. The chosen statistical method to validate the model was structural equation modelling (SEM) analysis. Our sample included highly educated people, who mostly possess IT knowledge, while our results indicate that opinions about the company and perception of job loss due to AI in the next 10 years are statistically significant predictors of AI-related turnover intention. It is believed that this study will shed light on how the perception of AI and changes to the workplace due to AI adoption impact the employees' turnover intention and fear of being laid off.

Keywords: Artificial Intelligence, Employees' turnover intention, Human resources, Workplace

Veljko Uskoković, Faculty of Organizational Sciences, University of Belgrade Milica Maričić, Faculty of Organizational Sciences, University of Belgrade Aleksandra Dacić-Pilčević, European Medicines Agency Veljko Jeremić, Faculty of Organizational Sciences, University of Belgrade

Navigating the Landscape: Unveiling the Reflection of AI in the Sharing Economy through Bibliometric-based Analysis

An unprecedented surge in scholarly attention has been devoted to integrating artificial intelligence (AI) within diverse scientific domains. This rising interest has generated motivation to scrutinise the pervasive influence of AI within prominent economic paradigms, such as the sharing economy (SE). This study endeavours to explore and delineate the manifold intersections of AI within the SE, employing a bibliometricbased analytical framework. Adopting a terminological grounding of AI, a comprehensive array of AI-related applications in the sharing economy is surveyed, culminating in a bibliometric-oriented analysis aimed at identifying emergent themes and trends. The investigation systematically procures literature metadata from the Web of Science database spanning the past eight years, primarily focusing on citation topics in the sharing economy. In-depth analyses, facilitated by the Bibliometrix R package, a specialised tool for bibliometric assessments, are applied to meticulously selected papers. The ensuing discourse articulates nuanced insights into evolving trends and thematic transformations through various dimensions of bibliometric scrutiny. Notably, the findings underscore the preeminent role assumed by machine learning models within innovative sharing economy business frameworks, particularly those oriented towards productservice amalgamations. Additionally, the discernible prominence of using big data analysis in platform-based business models is accentuated as indispensable adjuncts for implementing servitisation in the sharing economy. This study concludes by proposing prospective research directions, followed by implications for interested parties, that may involve enhanced qualitative scrutiny of literature and a robust examination of the leading edges in the sharing economy.

Keywords: artificial intelligence, sharing economy, bibliometrics analysis

Tonći Svilokos, University of Dubrovnik, Department of Economics and Business **Mario Bilić**, University of Dubrovnik, Department of Economics and Business **Iris Lončar**, University of Dubrovnik, Department of Economics and Business

A Comprehensive Review of Artificial Intelligence Applications in the Financial Sector

This review paper presents an examination of the evolving landscape of Artificial Intelligence (AI) applications within the financial sector, aiming to shed light on how advancements in machine learning, natural language processing, and predictive analytics revolutionizing tasks such as risk management, fraud detection, customer service, and investment strategies. To achieve this, a systematic literature review was conducted, encompassing a wide array of scholarly articles, research papers and proceeding papers indexed in WoS database. Initial searches yielded a substantial corpus of articles, which were subsequently refined. The selection of 17 key papers, guided by citation count and abstract analysis, forms the basis for a nuanced discussion of AI's impact on various financial domains. Findings reveal the multifaceted contributions of AI, from enhancing operational efficiency to mitigating risks and fostering innovation within financial institutions. This review underscores the transformative potential of AI applications in fostering a more resilient, adaptive, and efficient financial ecosystem.

Keywords: Financial industry, Machine Learning, Risk Management, Fraud detection, Costumer services, Robo-advisors

Primož Pevcin, University of Ljubljana, Faculty of Public Administration **Katja Debelak**, University of Ljubljana, Faculty of Public Administration

Artificial intelligence and public management: a literature review of the prevailing directions of research

Although Artificial Intelligence (AI) has been used in management and business operations since 1980's, there has been increasing attention given to it in recent years, contributed to increased technological developments in the ICT industry. This also involves its application in the public sector. The paper at hand focuses on the analysis of main issues addressed by scholarly debates on the two-way relations between artificial intelligence and public management. A data-gathering procedure is utilized to collect the data for research, which is based on the systematic literature review process. The sample publications from the Web of Science, Scopus and Google Scholar databases are used, where we specifically search for the occurrence of keywords Artificial Intelligence in Public Administration, Public Sector and/or Public Governance. A fivestep review protocol is established, where we specifically focus on recently published scientific sources listed in the field Management/Public Administration, published in high-ranking journals that specifically discuss implications of AI in public sector, general attitude towards AI in management process, and perception of change that AI can create in the sector. The results of the analysis based on the finalized search process. The results of the scoping review indicate the existence of four main groups of research focus and reveal that research direction is mainly concentrated on the challenges related to AI integration and implementation in the sector, and attitudes towards AI and trust in it. There is however a lack of studies that analyse the role of AI in performing managerial functions in the sector. Thus, we argue that the relevance of AI for public management should be further analysed.

Keywords: Artificial Intelligence, Public management, Public sector, Management functions, Scoping literature review

SESSION 4

Friday, June 21th

Contemporary Management, Organization and Marketing Issues

Milica Latinovic, Faculty of Organizational Sciences, University of Belgrade Sladjana Benković, Faculty of Organizational Sciences, University of Belgrade Bojana Olgić Draženović, Faculty of Economics and Business, University of Rijeka

Cleantech Crowdfunding

Cleantech is not a new term, but it is becoming increasingly important following the release of the European Union's (EU) Cleantech Investment Plan. The EU is investing heavily in cleantech in an attempt to decarbonize the European Union and be more competitive than the USA and Asia. However, traditional financing options cannot address such intensive capital requirements. It is estimated that there is an investment gap of around 50 billion euros for the development of some cleantech technologies. In addition, EU funding sources for innovation are at risk due to EU budget cuts. Hence, one of the alternative funding sources for cleantech is therefore crowdfunding. This study seeks to explore whether cleantech crowdfunding has the potential to contribute to achieving the net zero agenda and to complement existing funding sources. The study examines EU equity crowdfunding platforms that support cleantech projects and identifies the factors that contribute to the success of the crowdfunding project. The results of the regression show that the number of investors, the promised IRR and the investment horizon are statistically significant for project success. More transparency and a global focus of the campaigns could help to attract more investors and support the EU's cleantech agenda.

Keywords: crowdfunding, cleantech, green finance

Agnes-Ildiko Wittrich, Faculty of Management, Comenius University Bratislava

The Project Manager of the Future – Will the role continue to exist?

The society is facing a steadily increasing grade of projectification driven by digitalization, growing complexity and need for innovation. Digitalization is driven forward by projects, so that a boost for project management is expected in the next years. The classic role model of the project manager is threatened to be divided between self-organized empowered teams, and agile role models. The paper aims to forecast whether the role of the project manager will still exist in the next decade. The research has been approached from a theoretical and a practical perspective. The research object is the project manager of the future, analyzed from the perspective of digital transformation. For the theoretical study the systematic literature review has been applied. The practical study aims to underline the research findings of the theoretical study on the future of the project manager role. The answer to the research question is ascertained from practical perspectives of project practitioners from different industries. The research survey method has been used. The results are beneficial for business organizations for developing leadership, and digital transformation models for roles in project management, for project practitioners to focus on their competences development for the future, for educational institutions to re-think and design their curricula.

Keywords: Project Manager, Role, Future, Digital Transformation

Željka Marčinko Trkulja, Libertas International University, Zagreb **Dinko Primorac**, University North, Koprivnica **Irena Bilić**, University Algebra

Investing in Customer Loyalty Programs: Simulating costs in defensive strategies

The aim of this research is to introduce a novel approach to address the challenge of allocating investment between offensive and defensive marketing strategies. By utilizing a modified Lanchester model of combat, the study seeks to offer insights into optimizing marketing decisions in competitive markets. Through the derivation of Nash feedback equilibrium, the research provides a robust framework for finding solutions to the resulting nonlinear system of equations, efficiently solved using the Newton method. Focusing on a duopoly scenario with varying market shares, the study aims to shed light on the intricate dynamics between offensive and defensive marketing efforts. Through computational methods like the Newton method, the research highlights the significance of comprehensively understanding these dynamics to develop and refine defensive marketing strategies. Ultimately, the aim is to elucidate how these strategies play a crucial role in enhancing a company's competitive edge in the marketplace. By bridging theoretical insights with practical applications, the study contributes to advancing the understanding of marketing strategies in competitive environments, while underscoring the importance of leveraging computational tools to inform strategic decision-making processes. Further exploration in this area holds promise for refining marketing strategies and improving competitiveness in dynamic market landscapes.

Keywords: Lanchester model, Marketing strategies, Differential games, Competitive Dynamics

Lara Jelenc, Faculty of Economics and Business, University of Rijeka

Connecting the Dots in Lean Implementation- Insights from Qualitative Data Analysis in Croatian Lean Companies

Lean approach originated with the Toyota principles and philosophy of production, expended to lean methodology, lean thinking and lean culture just to name a few. The underlying principles of lean, focusing on cost reduction and waste elimination, increasing efficiency and effectiveness of business processes, gained revival role in Industry 4.0 and started to focus even more on the agile and innovation approach with the mission of business processes continuous improvement. Although present in the literature for the past five decades, lean implementation faces lower level of success. The reasons could be grouped by identifying challenges, obstacles and key success factors applying contingent approach to business depending on the industry, country, level of knowledge and readiness for lean implementation. This paper uses qualitative methods, more specific thematic method of analysis in order not just to identify existing dots- key factors in the literature on lean implementation but offers a way how to connect them in the process manner. The proposed model is based on the qualitative analysis of 17 lean managers from 11 Croatian lean companies. The model incorporates two hierarchy levels, four iteration processes and five steps in lean implementation. The paper is in line with the findings of literature of change management adjusted for the case of lean implementation. The model could be used for educational purposes in lean training and business improvement interventions. The next research step is to further build validation of the model by testing it within and across different cultures and industries.

Keywords: Lean, Lean Implementation, Qualitative Methods, Thematic Analysis, Croatian lean Companies

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Pivovara Daruvar is a historic Croatian brewery, known for producing high-quality beers since 1840. Located in the town of Daruvar, it combines traditional brewing techniques with modern innovations to offer a diverse range of beer styles enjoyed both locally and internationally.



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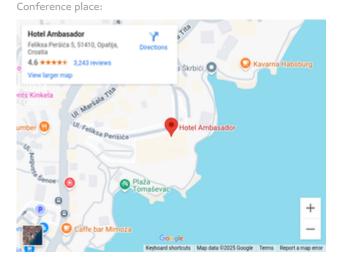
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