Nemzetközi szinten beágyazott kutatóvá válás – mire figyeljünk?

Sajtos László (University of Auckland Business School)

Január 20, 2022

THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

Tartalom

- Háttér
- Akadémiai élet elvárásai
- Mi kell ahhoz, hogy valaki nemzetközi szinten is jó kutatóvá váljon?
- Záró gondolatok

Háttér

2001-2005 PhDs évek (Aston University, Otago University)

Doktori iskola és a tanszék szerepe

Tudatos kutatói karrierépítés

2005 University of Canterbury, New Zealand

2006 University of Auckland, New Zealand

Hallgatói létszám növekedése és polarizációja

40% Oktatás

4 kurzus / év

Akadémiai élet elvárásai

THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

KEY STATISTICS 2020

5,984

Full Time Equivalent staff (FTE)

2,454 Academic

3,530 Professional

Gender (FTE)

Female	3,447
Male	2,516
Diverse	12
Not provided	9

Academic staff by position (FTE)	
Professor	14%
Associate Professor	14%
Research Fellow and Senior Research Fellow	15%
Senior Lecturer	23%
Lecturer	7%
Professional Teaching Fellow	14%
Other teaching and research roles	13%

Student : academic staff ratio (EFTS : AFTE)

17.9 : 1

34,388

Equivalent Full-Time Students (EFTS)

Student enrolments	2018	2019	2020
Equivalent Full-Time Students (EFTS)	33,805	34,521	34,388
By course funding level (EFTS)			
Non-Degree	513	690	803
Degree	24,875	25,200	25,008
Taught Postgraduate	2,965	5,523	5,621
Research Postgraduate	5,441	3,107	2,956

Gender (students)

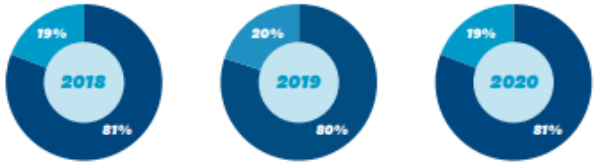
Male	18,065
Female	24,760
Diverse	175

Ethnicity (student headcount)	2018	2019	2020
European	14,985	14,570	14,308
Maori	3,078	3,117	3,073
Pacific Island	3,704	3,638	3,714
Asian	18,621	19,466	19,611
MELAA	1,559	1,579	1,607
Other	812	778	687
Total	**42,759**	**43,148**	**43,000**

Age group (student headcount)	2018	2019	2020
18 or less	2,085	1,892	1,871
19 - 20	11,567	11,897	11,767
21 - 23	13,967	14,228	14,143
24 - 29	7,829	7,903	7,730
30 - 39	4,324	4,400	4,563
40+	2,987	2,958	2,926
Total	**42,759**	**43,278**	**43,000**

Residency (student headcount)

Local Overseas



Residency (students)	2018	2019	2020
Local	34,739	34,600	34,800
Overseas	8,020	8,678	8,200
Total	**42,759**	**43,278**	**43,000**

International Students (headcount)

Top 10 countries	2020
China, People's Republic of	4,408
India	606
United States	399
Malaysia	307
Korea, Republic of	259
Indonesia	189
Hong Kong	150
Viet Nam	147
Iran	141
United Kingdom	100

NEW ZEALAND'S TOP RANKED UNIVERSITY*

*QS World University Rankings 2020

#1 IN NEW ZEALAND
for 35 of the 40 subjects in which we are ranked.*

*QS World University Rankings by Subject 2020

Elvárások a PhD hallgatókkal szemben

Akadémiai élet elvárásai

Kutatás

Kutatási program: kapcsolati marketing, digitális tech (AI) és skálafejlesztés,/tesztelés

Föbb újságok: JSR, JSM, JSTP, JIM, IMM, JBR, IJRM, MT, Psych & Marketing, JAR, (45+ publikált cikk)

40% Kutatás: 2-3 publikáció évente
Kutatási program alakitasa (feeding the pipeline): Kollaborátorok (vertikális-horizontális), posztgraduális hallgató (50+)

Vendégprofesszor: Louisiana Tech (USA); Henley Business School (UK); Bocconi University (Italy) Wilfrid Laurier University (Canada); Arizona State University (USA); Free University of Berlin, (Germany) Curtin University (Australia); Xiamen University (Malayzia); *Peking University, Sun-Yat Sen University (Kina);*

2017- Research Associate, Digital Media Lab, University of Massachussets (USA)

2019- Adjunct Professor, Curtin University (Australia)

Akadémiai élet elvárásai

Új sikerténye zők

Tradicionális sikerténye zők
Publikációs nyomás

Egyetemen kivüli támogatás:
Auckland District Health Board NZ$ 100,000
Health Research Council: NZ$1.2M
Egyetemi és business school támogatás
UABS NZ$ 150,000

Kutatási központok:
2020 Health & Well-being Research Beacon, Co-Director
2020 Centre of Digital Transformation, Core Member

Akadémiai élet elvárásai

20% Szolgáltatás/ Leadership

Egyetemi Adminisztráció:
Honours/Masters kordinátor (2009-); Kutatási bizottság (2013-2014); Etikai bizottság (2014-2017)

Egyetemen kivül:
Szerkesztői munka: Journal of Service Theory and Practice (Associate editor), Journal of Services Marketing, Asia Pacific Journal of Marketing & Logistics
Konferencia: ANZMAC (Co-chair, 2013); Global Marketing Conference (Co-chair, 2018-2019); MarTech (Co-Chair, 2019-)
ANZMAC Executive Member (2014-2015), President (2016-2017)

Elismerések

2018	Service Excellence Award	Global Marketing Conference
2017	Best Paper Award	American Marketing Association (Summer) Conference
2016	Teaching Excellence Award	University of Auckland Business School
2016	Teaching Innovation Award	Innovation in Learning and Teaching
2013	Best Reviewer Award	Journal of Service Theory and Practice
2011	Research Excellence Awards	University of Auckland Business School
2011	Best Paper Award	Global Conference on Business and Finance
2005	Best Paper Award	Australian and New Zealand Marketing Academy

Akadémiai élet elvárásai

Mi kell ahhoz, hogy valaki nemzetközi szinten is jó kutatóvá váljon?

Újdonság (alkalmazott-digitális alkalmazott kollaboráció)

Shared Customer Journey: Costs and Benefits of Sharing Agency with AI in Retailing and Services

Abstract

Purpose. Artificial intelligence (AI) is changing the nature of service interactions and the ways in which consumers make decisions. Customers make decisions with AI throughout multiple, successive stages of a customer-AI joint decision-making process. In contrast to previous research that has examined human-AI interactions and decisions in isolation, this study proposes a customer journey approach, which we refer to as 'shared customer journey' (SCJ). This study develops the conceptual basis for SCJ and the resulting perceived shared agency and proposes research directions for future researchers.

Design/methodology/approach. This conceptual work draws from a structured, multidisciplinary review of the literature on two topics: joint decision making and human-AI interaction.

Findings. This research offers an understanding of shared customer journeys through the cost-benefit trade-offs. the role of perceived shared agency in an AI–customer decision is crucial, as perceived shared agency represents a source, mechanism, delimiter and effect of a human's or a machine's actions. The consequences of sharing agency may thus differ across various retailing contexts, and, with it, the types of risks associated with human–AI interaction.

Originality. Previous research has mostly focused on (acceptance vs. aversion) attitude towards AI. In contrast, this research offers a stage-based framework of the shared customer journey (SCJ) featuring cost-benefit trade-offs in human-AI interactions, which is proposed to contribute to customers' perception of shared agency (PSA). To our knowledge, the proposed framework represents a significant departure from current conceptualizations of human–AI interactions.

Keywords: Joint Decision Making, Shared Agency, Perceived Shared Agency, Artificial Intelligence, Shared Customer Journey

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Challenges and Opportunities for Marketing Scholars in Times of the Fourth Industrial Revolution

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[b] University of Auckland, Auckland, New Zealand
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Available online 12 July 2020

Abstract

Artificial Intelligence (AI) and 5G connectivity have been identified as drivers of the so-called Fourth Industrial Revolution (FIR). AI and 5G, through emerging technologies such as blockchain, gene editing, Internet of Things sensors, nanotechnology, or 3D printing accelerate a blurring of boundaries between digital, biological, and physical spheres. In this editorial, we introduce the term *boundary object*, or boundary technology, that can help process more information (syntactic boundary) for enhanced learning (semantic boundary) and that can create a higher-level intelligence (pragmatic boundary). Boundary objects are also a means of representing, learning about, and transforming knowledge at a given boundary. We propose that crossing syntactic, semantic, and pragmatic boundaries is facilitated by three FIR phenomena (big data, machine learning, and AI). Each of these phenomena possesses a unique capability (processing, learning, and adaptation) to help communities learn about their differences and dependences. We also show how the six articles in this special issue are related to boundary and sphere challenges, and we provide an overview of directions for future research. All in all, marketing scholars should focus on enhancing their abilities in knowledge integration across boundaries to sustain their role as cutting-edge scientists.

Keywords: Artificial intelligence (AI); Boundary object; CRM; Fourth industrial revolution (FIR); Physical, digital, and biological spheres

Challenging the Boundaries Between Physical, Digital, and Biological Spheres

The birth of modern Artificial Intelligence (AI) is associated with the work of Turing (Turing, 1950), which significantly shaped the way in which we think about AI and the capabilities it provides. These capabilities are associated with human intelligence, namely to store and access knowledge, learn and make decisions, and to adapt to the environment (Russell & Norvig, 2010). Interest in new technologies—such as the Internet-of-Things (IoT), Virtual Reality (VR), digital assistants, blockchain, and the like—has surged in recent years as part of the Fourth Industrial Revolution (FIR). FIR is advocated to bring significant opportunities as well as risks for businesses, customers, governments, and society at large. Klaus Schwab at the World Economic Forum noted that emerging technologies are blurring the boundaries between physical, biological, and digital spheres (Schwab, 2017; see also Agrawal, Gans, & Goldfarb, 2018). These spheres refer to the activities, interactions, and processes, in the physical, digital, and biological processes as well as the underlying science communities and disciplines, respectively. FIR—through the emergence of new technologies—will significantly contribute to the integration of different knowledge domains, and thus speed up the innovation process (Pitsis, Beckman, Steinert, Oviedo, & Maisch, 2020). By definition, these technologies are the ones that can help or hinder connections between those domains. Analyzing these boundaries through exploring the value that can be created for customers, suppliers, and society allows us to understand how marketing as a

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Employee-(Ro)bot collaboration in service: an interdependence perspective

Abstract

Purpose: collaboration between frontline employees (FLEs) and frontline robots (FLRs) is expected to play a vital role in service delivery in these increasingly disrupted times. Firms are facing the challenge of designing effective FLE-FLR collaborations to enhance customer experience. This paper develops a framework to explore the potential of FLE-FLR collaboration through the lens of interdependence in customer service experience and advances research that specifically focuses on employee-robot team development.

Design/methodology/approach: this paper uses a conceptual approach rooted in the interdependence theory, team design, management, robotics and automation literature.

Findings: the authors propose and define the Frontline employee – Frontline robot interdependence (FLERI) concept based on three structural components of an interdependent relationship – joint goal, joint workflow, and joint decision-making authority. The authors also provide propositions that outline the potential impact of FLERI on customer experience and employee performance, and outline several boundary conditions that could enhance or inhibit those effects.

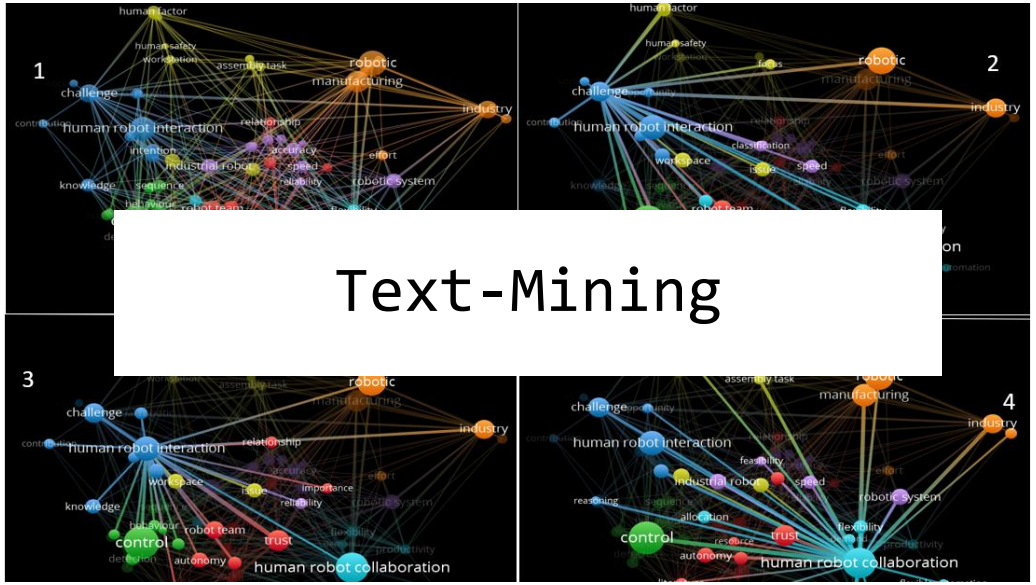
Practical implications: managerial insights into designing an employee-robot team in service delivery are provided.

Keywords: Joint goal, Joint workflow, Joint decision-making authority, FLE-FLR teams, Collaboration, Interdependence, Service experience

Paper type: conceptual paper

Mi kell ahhoz, hogy valaki nemzetközi szinten is jó kutatóvá váljon?

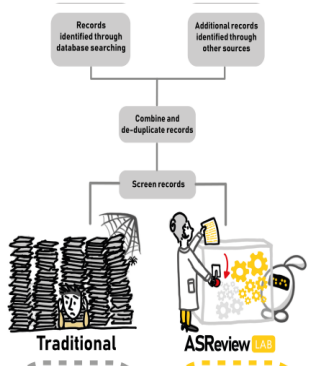
Irodalmi áttekintés (Literature Review)



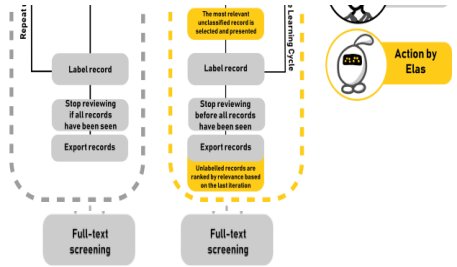
Text-Mining

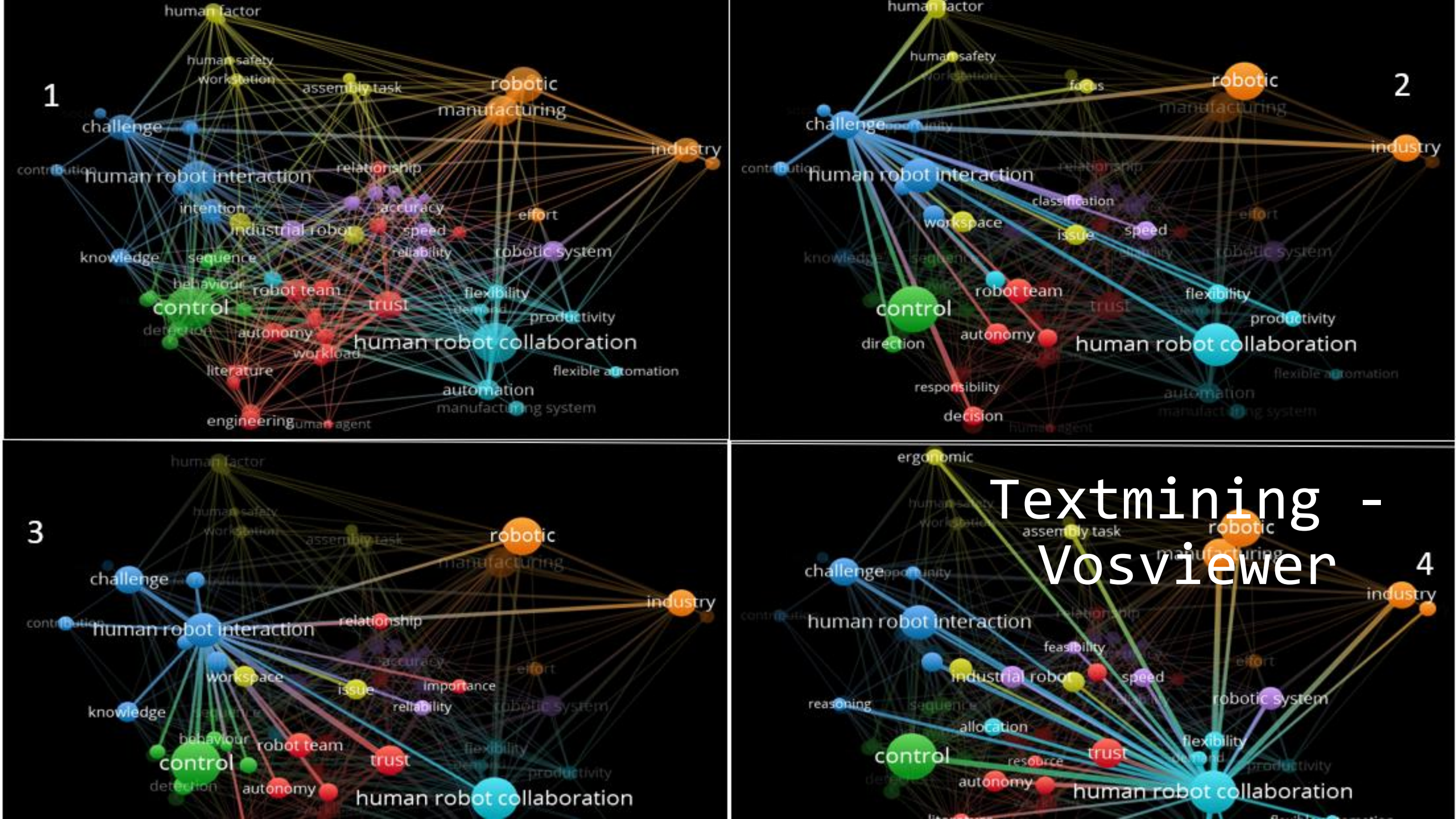
Author(s)	Sharedness features in interdependence concept			Context / Theoretical background	Mediators	Key DVs	Related findings	Discipline
	Goal sharing	Authority sharing	Workload sharing					
This study	✓	✓	✓	FLEs-Robots as a team / Interdependence	Team cooperation / Coordination fluency	Customer service experience	-	
Lu et al., (2020)			✓	[Literature review]	-	-	An issue with structuring an organization with robots is how employees can differentiate them from the robots. A key approach is to take advantage of robot's analytical skills while improving employee soft skills	Service marketing
*Xiao and Kumar (2021)			✓	[Conceptual paper]	Degree of robotics adoption (DRA)	Service quality and experience	The collaboration between humans and robots can be conceptualized as the distribution of labor hours. Low DRA enhances service quality up to a peak point then levels off when DRA continues to increase.	
Bruno and Antonelli (2018)							The authors developed a procedure to distribute the workload between humans and robots. They noted that in order to distribute workload between them, one	
*Lehmann et a (2017)								
Gombolay et a (2017)								
Gombolay et a (2015)						with robot	Participants reported that they would likely work with the robot again when they shared the authority with the robot rather than sole control of it.	Robotics and Automation
Ötting et al., (2020)			✓	Robot design features (Interface visibility, information feedback, autonomy; adaptability)	-	Task performance, Mental workload	Robot autonomy is significantly reduced mental workload of human	
*Döppner, Derckx and Schoder (2019)	✓		✓	Symbiotic co-evolution	-	-	As the dispatcher and the agent shared the goal of relocating the air cargo network to meet airlines' demands, such goal fosters cooperativeness between the dispatcher and the agent. Workload sharing is distributed more toward the agent such that they are allocated with more cognitively demanded tasks; which led to an improvement in dispatcher decision-making quality	

Systematic Literature Review



Machine Learning





Textmining - Vosviewer

Strukturált szakirodalmi összegzés (Systematic Literature Review)

Author(s)	Sharedness features in interdependence concept			Context / Theoretical background	Mediators	Key DVs	Related findings	Discipline
	Goal sharing	Authority sharing	Workload sharing					
This study	✓	✓	✓	**FLEs-Robots as a team / Interdependence**	**Team cooperation / Coordination fluency**	**Customer service experience**	-	Service marketing
Lu et al., (2020)			✓	[Literature review]	-	-	An issue with structuring an organization with robots is how employees can differentiate them from the robots. A key approach is to take advantage of robot's analytical skills while improving employee soft skills	
***Xiao and Kumar (2021)**			✓	[Conceptual paper]	Degree of robotics adoption (DRA)	Service quality and experience	The collaboration between humans and robots can be conceptualized as the distribution of labor hours. Low DRA enhances service quality up to a peak point then levels off when DRA continues to increase.	
Bruno and Antonelli (2018)			✓	[Field research]	-	-	The authors developed a procedure to distribute the workload between humans and robots. They noted that in order to distribute workload between them, one must consider skills that humans and robots possessed compared to the requirement of the tasks	Robotics and Automation
***Lehmann et al., (2017)**		✓		[Field research]	-	-	The study found that in a surgeon-robot operating team when the surgeon holds more authority to command the robot in needle insertion experiment, the team can minimize deflection stitches with high accuracy	
Gombolay et al., (2017)		✓		[Laboratory research]	-	Situation awareness / Workflow	In a given workflow, if there is a higher chance that humans must intervene to modify work allocations or an anticipated for reduced situation awareness, the decision-making authority should be given to human and vice versa	
Gombolay et al., (2015)		✓		[Laboratory research]	-	Intention to work with robot	The participant-robot teams perform more efficiently when the robot has more authority in the task allocation experiment. Participants reported that they would likely work with the robot again when they shared the authority with the robot rather than sole control of it.	
Ötting et al., (2020)			✓	Robot design features (Interface visibility, information feedback, autonomy; adaptability)	-	Task performance, Mental workload	Robot autonomy is significantly reduced mental workload of human	
***Döppner, Derckx and Schoder (2019)**	✓		✓	Symbiotic co-evolution	-	-	As the dispatcher and the agent shared the goal of relocating the air cargo network to meet airlines' demands, such goal fosters cooperativeness between the dispatcher and the agent. Workload sharing is distributed more toward the agent such that they are allocated with more cognitively demanded tasks; which led to an improvement in dispatcher decision-making quality	

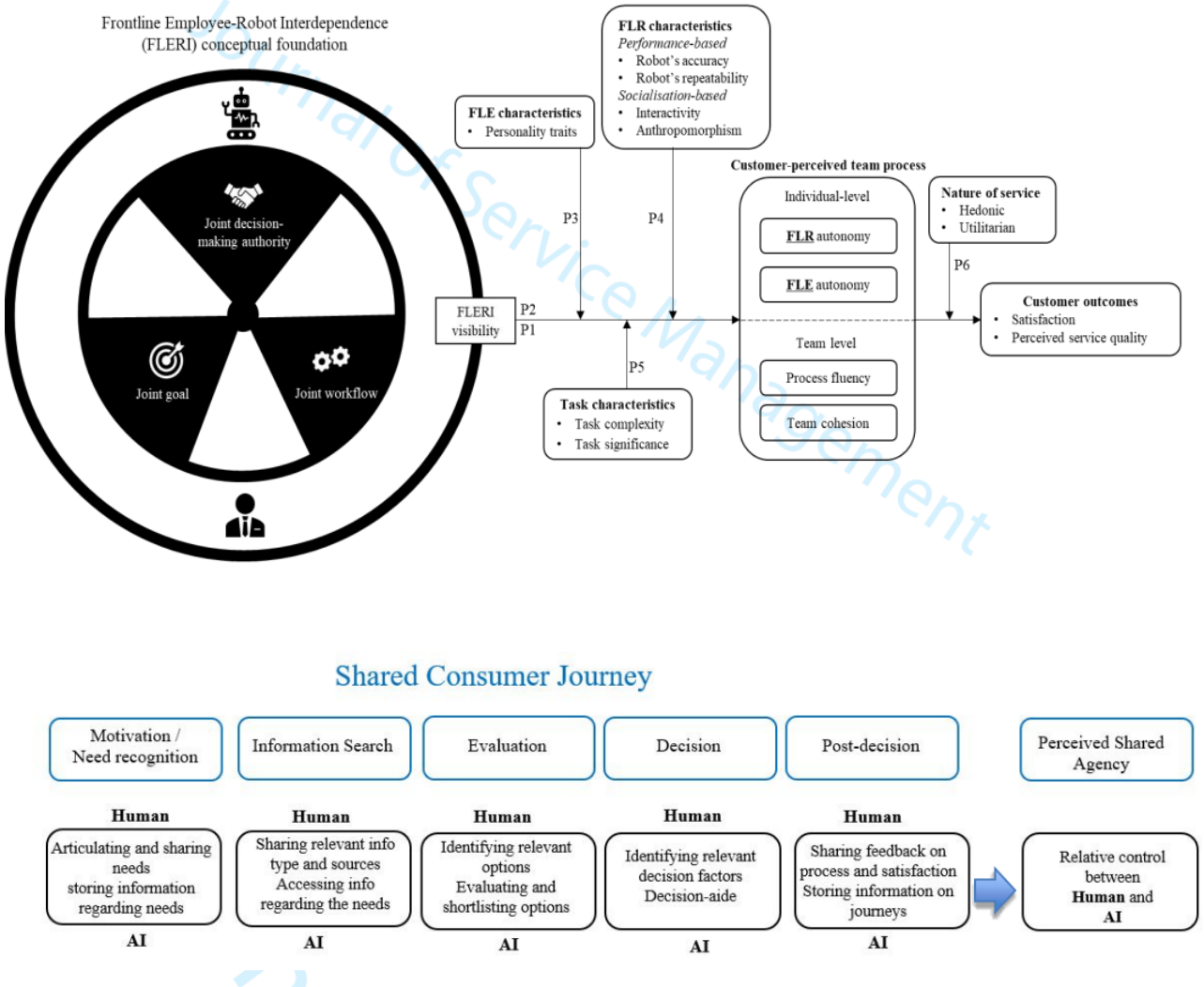
Criteria	Systematic Literature Review (SLR)	Text Mining-Assisted Review (TMAR)	Machine-Learning Review (MLAR)
Input	Cikk választási kritériumok	Kulcsszavak meghatarozasa	A rendszer betanitasa a kutató által h melyik cikk fontos és melyik nem
Módszer	Koncepcionális modell kifejlesztéséhez	Kapcsolatok megtalálása kulcsszavak-/témák között	Cikkek között felismerni hogy melyik a fontos
Technikai tudás szükségessége	Nem szükséges	Alacsony	Közepes
Szakismeret szükségessége	Magas	Közepes	Közepes

Mi kell ahhoz, hogy valaki nemzetközi szinten is jó kutatóvá váljon?

Koncepcionális Modell

Boundary and sphere challenges.

Spheres: Locale of Integration (Exemplary Boundary Object Technologies)	Challenges and Goals	Syntactic difference: Language Focus: Information Processing	Semantic difference: Meaning Focus: Learning	Pragmatic difference: Interest Focus: Intelligence	Manuscript in this issue
	Boundary Goals	Developing a shared terminology through **knowledge transfer**	Developing a shared understanding through **knowledge translation**	Developing a shared interest through **knowledge transformation**	
Physical ↔ Digital (Robots, AR/VR/MR, IoT/RFID, 3D printing, drones, autonomous vehicles, Social networks, Blockchain, AI algorithms)	Challenge	Differences in representation of knowledge at the physical-digital interface	Differences in meaning of knowledge at the physical-digital interface	Differences in interests in using knowledge at the physical-digital interface	Hoyer et al., Gupta et al., Rangaswamy et al., Libai et al. De Bruyn et al.
	Goal	Capture, process and digitize (more and diverse) behaviors and interactions at the physical-digital interface	Translating tacit into explicit knowledge and create mental models from experiences at the physical-digital interface	Transforming knowledge at stake by understanding knowledge-in-context (goals, task, etc.) at the physical-digital interface	
Digital ↔ Biological (Smart devices/wearables, Genetic editing and sequencing)	Challenge	Differences in representation of knowledge at the digital-biological interface	Differences in meaning of knowledge at the digital-biological interface	Differences in interests in using knowledge at the digital-biological interface	Grewal et al., Hoyer et al., De Bruyn et al.
	Goal	Capture, process and digitize (more and diverse) physiological and biological activities and processes at the digital-biological interface	Translating tacit into explicit knowledge and create mental models from experiences at the digital-biological interface	Transforming knowledge at stake by understanding 6knowledge-in-context (goals, task, etc.) at the digital-biological interface	
Physical ↔ Biological (Nanomaterials/nano-technology, Biosensors, bionics/prosthetics)	Challenge	Differences in representation of knowledge at the digital-biological interface	Differences in meaning of knowledge at the digital-biological interface	Differences in interests in using knowledge at the digital-biological interface	Grewal et al.
	Goal	Capture and process (more and diverse) physiological and biological activities and processes at the physical-biological interface	Translating tacit into explicit knowledge and create mental models from experiences at the physical-biological interface	Transforming knowledge at stake by understanding knowledge-in-context (goals, task, etc.) at the physical-biological interface	



Relevancia

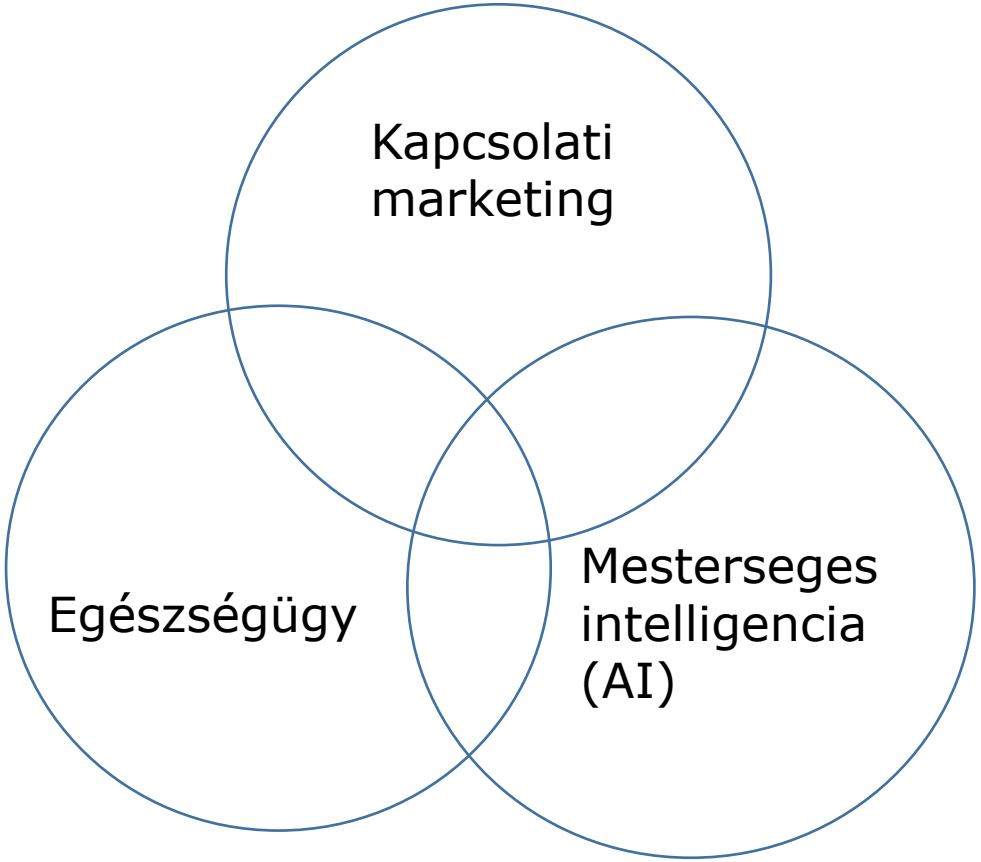
Mi kell ahhoz, hogy valaki nemzetközi szinten is jó kutatóvá váljon?

- It’s all academic
- Relevancia v újdonság v módszertani szigor
- Agents of learning and change

Digital sustainability index

TCS and Auckland Business School Launch World-first APAC-Focused Digital Sustainability Index.

Mi kell ahhoz, hogy valaki nemzetközi szinten is jó kutatóvá váljon?



Egyedi jellemvonások

- Kitartás
- Motiváció és kíváncsiság
- Tudás alkalmazása
- Egyensulyozni a versengő igények között

Mi kell ahhoz, hogy valaki nemzetközi szinten is jó kutatóvá váljon?

Disszemináció

Idézet

Translation

Záró gondolatok

Globális szakma: Mind the Gap

Vállalkozói mentalitás

Agents of learning and change

Köszönöm a figyelmüket

Email: l.sajtos@auckland.ac.nz