

DAUGAVPILS UNIVERSITĀTE
HUMANITĀRO UN SOCIĀLO ZINĀTŅU INSTITŪTS

**DAUGAVPILS UNIVERSITĀTES
HUMANITĀRO UN SOCIĀLO ZINĀTŅU INSTITŪTA UN
HUMANITĀRO UN SOCIĀLO ZINĀTŅU FAKULTĀTES
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SATURS

Anna Dembovskaya, Irēna Kokina (Latvija)	4
VADĪTĀJA DOMĀŠANAS VEIDI UN TO SAKARĪBA AR VADĪBAS EFEKTIVITĀTI	
Types of managerial thinking and their relationship to management effectiveness	
Qiuyu Huang (China)	14
THE IMPACT OF PSYCHOLOGICAL STRESS ON THE COMPETITIVE PERFORMANCE OF COLLEGIATE SWIMMERS	
Psiholoģiskā stresa ietekme uz studentu komandu peldētāju sacensību rezultātiem	
Lāsma Jaudzema-Danovska, Irēna Kokina (Latvija)	22
ATKARĪBU RISKI UN PROFILAKSE DARBA VIDĒ ORGANIZĀCIJAS KULTŪRAS KONTEKSTĀ	
Addiction risks and their prevention in the workplace in the context of organizational culture	
Lingxian Jiang (China)	35
THE POSITIVE ROLE OF ARTIFICIAL INTELLIGENCE IN ENHANCING ORGANISATIONAL OPERATIONAL EFFICIENCY DURING DIGITAL TRANSFORMATION	
Mākslīgā intelekta pozitīvā loma organizācijas darbības efektivitātes uzlabošanai digitālās transformācijas laikā	
Meijun Liu (China)	43
FORMULATING AND MANAGING ORGANIZATIONAL GOALS	
Organizācijas mērķu formulēšana un pārvaldība	
Yunning Shao (China)	52
HOW ARE DIGITAL TECHNOLOGIES CHANGING POWER HIERARCHIES IN ORGANIZATIONS? THE CONCEPTUAL FRAMEWORK FOR EMPIRICAL RESEARCH	
Kā digitālās tehnoloģijas maina varas hierarhijas organizācijās? Konceptuālais ietvars empīriskai izpētei	
Lizhi Wang (China)	61
ADAPTABILITY OF HUMAN RESOURCE MANAGEMENT AT ENERGY ENTERPRISES TO GREEN TRANSFORMATION: CONCEPTUALIZATION AND MEASUREMENT	
Cilvēkresursu vadības pielāgojamība enerģētikas uzņēmumos zaļajai transformācijai: konceptualizācija un mērījumi	
Shupeng Zhao (China)	69
BUILDING THE “THIRD CULTURE”: A MIXED-METHODS STUDY OF CULTURAL ADAPTATION STRATEGIES FOR CHINESE AND EUROPEAN MULTINATIONAL PROJECT TEAMS	
Veidojot “Trešo kultūru”: kultūras adaptācijas stratēģiju izpēte Ķīnas un Eiropas daudzvalstu projektu komandām	

VADĪTĀJA DOMĀŠANAS VEIDI UN TO SAKARĪBA AR VADĪBAS EFEKTIVITĀTI

Kopsavilkums. Mūsdienu vadītāji saskaras ar nepieciešamību pieņemt lēmumus nenoteiktības un pastāvīgu izaicinājumu apstākļos. Pārmaiņu laikmetā vadītāja domāšana kļūst par virzošo spēku visai organizācijai; tā veido pamatu atbildīgiem lēmumiem un inovatīvai rīcībai. Pētījuma mērķis ir izpētīt sakarību starp vadītāja domāšanas veidiem un vadības efektivitāti. Lai sasniegtu mērķi tiek veikta Latvijas organizāciju vadītāju aptauja (N=52). Pētījuma problēma ir saistīta ar to, ka šodien tradicionālie vadības modeļi zaudē savu efektivitāti, un priekšplānā izvirzās spēja domāt stratēģiski, sistēmiski un elastīgi, spējot saskatīt attiecības, paredzēt sekas un veidot jaunas nozīmes. Pētījuma novitāti veido vadītāja domāšanas izpēte, kas atklāj tās nozīmi elastīgā reaģēšanā uz vides izaicinājumiem un ciešo saikni ar vadības efektivitātes rādītājiem. Turklāt līdzīgs pētījums nekad agrāk nav bijis veikts. Pētījuma rezultāti rāda, ka starp vadītāju domāšanas veidiem un vadības efektivitāti pastāv statistiski nozīmīga sakarība.

Atslēgas vārdi: domāšanas veidi, Džons Maksvels, sabalansēto rādītāju sistēma, efektivitāte, sakarība.

Ievads

Mūsdienu mainīgā un sarežģītā vide izvirza ikvienam vadītājam augstas prasības – spēju elastīgi pielāgoties pārmaiņām, analizēt informāciju, pieņemt pamatotus lēmumus un vienlaikus saglabāt stratēģisku skatījumu (Brassey et al., 2021; Brough et al., 2023; WEF, 2025). Tādēļ būtiska kļūst vadītāja domāšana un spēja izmantot dažādus domāšanas veidus atbilstoši situācijai.

Pētījuma **aktualitāti** nosaka nepieciešamība labāk izprast, kā vadītāju domāšana ir saistīta ar organizācijas vadības efektivitāti. Mainīgā uzņēmējdarbības vidē ar tradicionālām vadības pieejām ne vienmēr ir pietiekami, jo vadītājam vienlaikus jāspēj saskatīt kopainu, domāt stratēģiski, izvērtēt situāciju reālistiski, meklēt radošus risinājumus un koncentrēties uz izvirzītajiem mērķiem. Šo nozīmi uzsver arī jaunākie pētījumi, kuros akcentēta elastīgas un adaptīvas domāšanas nozīme vadītāja darbībā (Brassey et al., 2021; Brough et al., 2023; Poláková et al., 2023; Li, 2022). Turklāt Pasaules Ekonomikas foruma 2025. gada ziņojumā kognitīvā elastība līdzās citām prasmēm atzīta par būtisku profesionālo panākumu priekšnoteikumu (WEF, 2025).

Vadītāju domāšanas nozīme organizācijas attīstībā ir plaši pētīta un atzīta vairāku autoru darbos. Saini un Shabnam (2021), Mumford un autoru kolektīvs (2023), Ashley-Osuzoka (2024) un Kerr (2018) pēta domāšanas saistību ar vadītāja darbību, inovācijām, stratēģisko vadību un darbinieku iesaisti. Īpaši nozīmīga šī pētījuma kontekstā ir Džona Maksvela (*J. C. Maxwell*) izstrādātā 11 domāšanas veidu koncepcija, kas ietver plaša skatījuma, stratēģisko, reālistisko, radošo, iespēju, reflektīvo, populāro, dalīto, pašaiizliedzīgo, uz rezultātu orientēto un fokusēto domāšanu (Maxwell, 2003).

Vadības efektivitātes novērtēšanai pētījumā izmantota R. Kaplana un D. Nortona izstrādātā sabalansēto rādītāju sistēma (*Balanced Scorecard, BSC*), kas organizācijas darbību vērtē četrās perspektīvās – finansēs, klientu apkalpošanā, iekšējos procesos, kā arī mācīšanās un izaugsmē (Kaplan, Norton, 1992).

Pētījuma **mērķis** ir noskaidrot statistiski nozīmīgas sakarības starp vadītāju domāšanas veidiem un vadības efektivitātes rādītājiem Latvijas organizācijās.

Pētījuma **novitāti** veido vadītāju domāšanas veidu un to statistiski nozīmīgo sakarību ar vadības efektivitātes rādītājiem analīze Latvijas organizāciju kontekstā. Šāda pieeja Latvijas organizāciju vadītāju vidū iepriekš nav analizēta.

Teorētiskais ietvars

Domāšana nemitīgi attīstās un transformējas līdz ar pasaules mainīgumu. Jo mainīgāki apstākļi, jo augstāka ir prasība pēc elastīgas un adaptīvas domāšanas (Brassey et al., 2021). Spēja ātri analizēt jaunu informāciju un pielāgot savu rīcību ļauj cilvēkam efektīvi pielāgoties sarežģītiem un nestabiliem apstākļiem. Reaģējot uz vides izaicinājumiem, attīstās spēja rast nestandarta risinājumus un veidot jaunus uzvedības modeļus. 1947. gadā Alberts Einšteins (A. Einstein), viens no Atomzinātnieku ārkārtas komitejas (*Emergency Committee of Atomic Scientists*) dibinātājiem, brīdinot par kodolieroču bīstamību pasaulē, teica, ka “mums jāiemācās domāt jaunā veidā” (*We have to learn to think in a new way*) (Pugwash, 1955), tāpat, lai cilvēce izdzīvotu, ir nepieciešams būtiski jauns domāšanas veids (National Archives, 2024). Jāattīsta jauni domāšanas veidi, lai radītu efektīvākus risinājumus un pieredzi, kas palīdzēs atrisināt pašreizējās problēmas.

Ekonomiskā nestabilitāte, kvalificēta darbaspēka trūkums, paātrinātā digitalizācija, dažādi darba formāti un pieaugošā paaudžu plaša prasa, lai vadītāji būtu elastīgi un gatavi nepārtraukti mācīties un pilnveidoties (Brough et al., 2023; Poláková et al., 2023; Li, 2022). Vēl jo vairāk šodien saīsināts stratēģiskās plānošanas cikls padara vecās vadības pieejas neefektīvas (Farley et al., 2020). Mainīgajā vidē vadītājiem jārikojas proaktīvi, meklējot jaunus attīstības iespējas un atklājot potenciālos draudus (Sott, Bender, 2025).

Vides mainīgums prasa vadītājiem domāt ārpus rāmjiem, būt radošiem un izstrādāt neparastus risinājumus (Roellyanti, Lada, 2024). Lai gan daži vadītāji var uztvert pārmaiņas kā biedējošu neizbēgamību, domāšanas maiņa ļauj uztvert šīs pārmaiņas kā iespēju pozitīviem darbības rezultātiem un organizācijas izaugsmei (Shigley, 2025). Zīmīgi, ka izaugsmes domāšana pozitīvi korelē ar uz stiprajām pusēm balstītu vadību un inovatīvu uzvedību, uzlabojot vadības efektivitāti pārmaiņu laikā (Liu, Tong, 2022). Neskatoties uz to, ka 96% vadītāju uzskata, ka viņiem piemīt izaugsmes domāšana, tikai 45% darbinieku tam piekrīt, un tas liecina par atšķirībām attiecībā uz vadības domāšanas patiesumu (Talentlms, 2024). 2025. gada Pasaules Ekonomikas foruma ziņojumā “Nākotnes darbavietas” (*Future of Jobs*) līdzās noturībai un veiklībai domāšanas jeb kognitīvā elastība ir atzīmēta kā viena no 10 svarīgākajām prasmēm, kas ir kritiski svarīgas profesionālajiem panākumiem (WEF, 2025).

Zinātniskā literatūra aplūko dažādus domāšanas veidus, klasificējot tos pēc satura (piem., abstrakta), psihiskiem procesiem (piem., analītiska, intuitīva), rezultāta (piem., produktīva) u.c. (Cox, 2024; Ivantsiv, 2024). Starp vairākām domāšanas veidu klasifikācijām īpašu vietu ieņem amerikāņu runātāja un mācītāja, vadības speciālista Džona Maksvela (*J. C. Maxwell*) domāšanas koncepcija, kas ietver 11 domāšanas veidus, kuri ir raksturīgi veiksmīgiem vadītājiem, proti, **plaša skatījuma domāšana, stratēģiska domāšana, reālistiska domāšana, radoša domāšana, iespēju domāšana, reflektīva domāšana, populāra domāšana, dalīta domāšana, pašreizējās domāšana, uz rezultātu orientēta domāšana, fokusēta domāšana** (Maxwell, 2003). Minēto 11 domāšanas veidu attīstīšana palīdz vadītājiem pāriet no ikdienas izdzīvošanas uz progresu un efektīvu vadību. Pieredzējis līderis Džefs Abots (*J. Abbott*) analizējot Džona Maksvela domāšanas koncepciju, atzīmē, ka “mēs mēdzam domāt neapzināti; Džons Maksvels atklāj domāšanu mūsu vietā un palīdz mums saskatīt daudzos elementus, ko veiksmīgi cilvēki izmanto savā ikdienā” (Kuethen, 2017). Džona Maksvela domāšanas koncepcija veicina pielāgošanās spēju vadītājiem, palīdz būt dziļdomīgiem, elastīgiem un sadarbības spējīgiem.

Vadītāja domāšana ir tieši saistīta ar viņa vadības efektivitāti, jo tā ir saistīta ar spēju saskatīt stratēģisko perspektīvu, pieņemot pārdomātus lēmumus un iedvesmot komandu (Saini, Shabnam, 2021). Pētījumi rāda, ka radoša domāšana veicina inovācijas (Mumford et al., 2023); stratēģiska domāšana veicina skaidru mērķu izvirzīšanu un attiecīgu resursu

piesaisti, kā arī uzlabo komandas motivēšanu (Ashley-Osuzoka, 2024); savukārt vadītāji ar augstāku emocionālo inteliģenci veicina labāku darba klimatu un nodrošina lielāku darbinieku iesaisti (Kerr, 2018). Vides nepastāvības un sarežģītības apstākļos, katrs vadītāja solis var būt izšķirošs. Vadītājam ir jāspēj precīzi noteikt, izmērīt un analizēt galvenos darbības rādītājus, kas tieši ietekmē organizācijas panākumus un peļņu. Tikai skaidrs priekšstats par to, kas notiek kritiski svarīgās organizācijas jomās (finanšu, apkalpošanas, iekšējo procesu un personāla vadības jomās), var pieņemt patiesi efektīvus vadības lēmumus. Vajadzīga priekšskata veidošanai šodien plaši pielieto R. Kaplana un D. Nortona izstrādāto sabalansēto rādītāju sistēmu (*Balanced Scorecard, BSC*), kas apvieno organizācijas 4 galvenās perspektīvas – finanšu, klientu apkalpošanas, iekšējo procesu un mācīšanās un izaugsmes perspektīvas (Kaplan, Norton, 1992). BSC tika izstrādāta, reaģējot uz pieaugošo biznesa vides sarežģītību, kad tradicionālie finanšu rādītāji vien nebija pietiekami, lai novērtētu organizācijas veiktspēju un ilgtermiņa potenciālu. Sabalansēto rādītāju sistēma ir stratēģisks vadības rīks, kas organizācijas misiju un stratēģiju pārvērš skaidri definētu rādītāju sistēmā (Yawson, Paros, 2023). Tā ļauj dziļāk izprast un novērtēt, kā organizācijas darbības atbilst tās ilgtermiņa mērķiem.

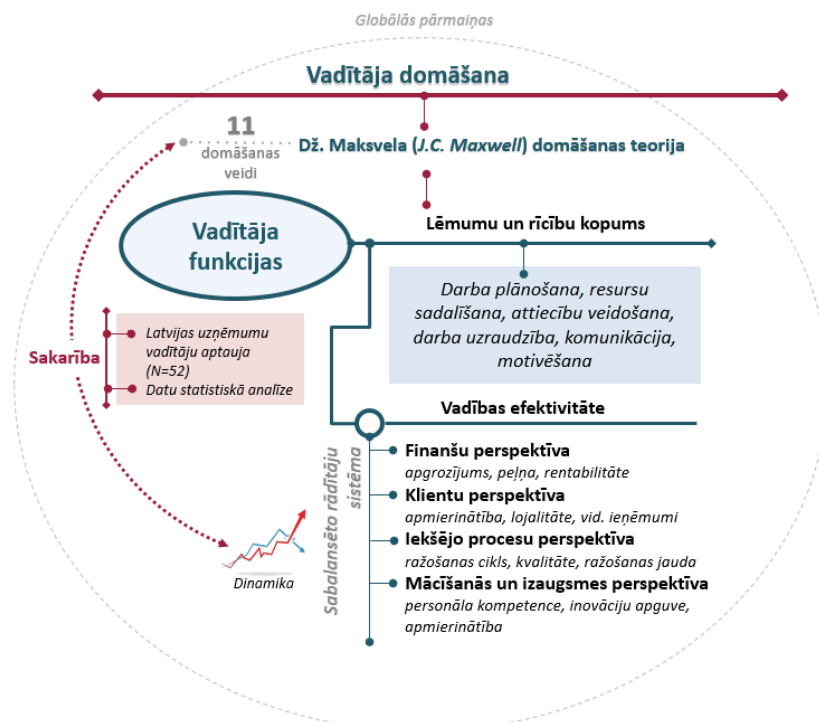
Pētījuma metodoloģija

Lai sasniegtu pētījuma mērķi ir izstrādāts atbilstošs pētījuma dizains, kas ir galvenais pētījuma orientieris. Pētījuma metodika satur sekojošus galvenos elementus:

- pētījuma izlase: Latvijas organizāciju vadītāji (N=52);
- datu vākšanas metode: aptauja anketēšana veidā, pētījuma rīks – tiešsaistes anketa;
- aptaujas veikšanas periods: divas nedēļas, 24.09.-08.10.2025.;
- datu apstrādes metodes: aprakstoša un secinoša statistika (korelācijas analīze);
- datu apstrādes programma: IBM SPSS Statistics.

Pētījuma ierobežojumi. Šajā pētījumā izlases lielums (N = 52) ir relatīvi mazs, kas samazina identificēto sakarību aprēķinu ticamību. Ņemot vērā izlases apjomu, aptaujas rezultāti atspoguļo aptaujāto organizāciju specifiku, nevar būt attiecināti uz visu Latvijas organizāciju ģenerālkopu.

1.attēlā sniegtais pētījuma modelis atspoguļo pētījuma saturu un gaitu.



1.attēls. Pētījuma dizains

Avots: autoru veidots attēls pēc Maxwell, 2003; Kaplan, Norton, 1992

Pētījuma izlasi veido 52 Latvijas organizācijas vadītāji, kas tika atlasītas nejaušā kārtībā, starp tiem augstākā, vidējā un zemākā līmeņu vadītāji. Anketēšana ir konfidenciāla un tās rezultāti izmantoti tikai apkopotā veidā. Kā galvenās datu apstrādes metodes tika izmantotas aprakstošās un secinošās statistikas metodes, tajā skaitā *Kronbaha alfas* (α) koeficients (*Cronbach's alpha*), *Šapiro-Vilka* tests (*Shapiro-Wilk test*) un *Spīrmena* koeficients (*Spearman's rank correlation coefficient*). Datu apstrādei un analīzei tika izmantota statistiskās analīzes programma IBM SPSS Statistics.

Vadītāju domāšanas veidu klasifikācijai izmantota Džona Maksvela (J. C. Maxwell) izstrādātā 11 domāšanas veidu koncepcija, kas raksturo veiksmīgam vadītājam nozīmīgus domāšanas aspektus, proti, *plaša skatījuma domāšana*, *stratēģiska domāšana*, *reālistiska domāšana*, *radoša domāšana*, *iespēju domāšana*, *reflektīva domāšana*, *populāra domāšana*, *dalīta domāšana*, *pašaižliedzīga domāšana*, *uz rezultātu orientēta domāšana*, *fokusēta domāšana* (Maxwell, 2003). Šī klasifikācija ļauj vadītāja domāšanu analizēt ne tikai kā individuālu psiholoģisku īpašību, bet arī kā ar vadības lēmumu pieņemšanu un organizācijas attīstību saistītu kompetenci. Pamatojoties uz šo teorētisko ietvaru, anketas apgalvojumi tika veidoti, sasaistot teorētiskajā literatūrā identificētos domāšanas veidus ar to praktiskajām izpausmēm vadītāja ikdienas darbībā. Tika vērtēta vadītāja spēja saskatīt kopainu, domāt stratēģiski un uzsvērt ilgtermiņa rezultātus, objektīvi vērtēt situācijas, saskatīt iespējas un meklēt nestandarta risinājumus, pieņemt lēmumus, atskatoties uz iepriekšējo pieredzi, kritiski izvērtēt vispārpieņemtos uzskatus, iesaistīt citus cilvēkus kopīgu risinājumu izstrādē, koncentrēties uz būtiskākajām prioritātēm un virzīties uz mērķu sasniegšanu. Minēto spēju vērtēšanai izmantota 5 punktu Likerta skala.

Vadības efektivitātes novērtēšanai pētījumā izmantots R. Kaplana un D. Nortona izstrādātā sabalansēto rādītāju sistēma (*Balanced Scorecard, BSC*), kas ietver četras perspektīvas: finanšu, klientu apkalpošanas, iekšējo procesu, kā arī mācīšanās un izaugsmes perspektīvu (Kaplan, Norton, 1992). Šīs perspektīvas tika izmantotas kā pamats vadības efektivitātes rādītāju noteikšanai. Aptaujā vadītāji novērtēja sekojošu organizācijas darbības

rādītāju izmaiņas pēdējo piecu gadu laikā: apgrozījums, peļņa un rentabilitāte; klientu apmierinātība, lojalitāte un vidējie ieņēmumi no viena klienta; ražošanas ciklu, produktu vai pakalpojumu kvalitāti un ražošanas jaudu; personāla kompetenci, personāla apmierinātību un inovācijas apguves tempu. Minēto rādītāju izmaiņu vērtēšanai izmantota 3 punktu skala (1=samazinājies(-usies), 2=nav mainījies(-usies), 3=palielinājies(-usies)).

Anketas jautājumi tika izstrādāti, balstoties uz teorētiskajā ietvarā analizētajiem vadītāja domāšanas viediem un vadības efektivitātes novērtēšanas pieejām. Anketa kopā ietver 7 jautājumus.

Pētījuma rezultātu apraksts un interpretācija

Katra kārtas skala tiek sadalīta uz atsevišķiem datu kopām, piemēram, skala “Domāšanas veidi” – uz 11 datu kopām (11 domāšanas veidi), kas satur trīs saistošus apgalvojumus, skala “Sabalansētie rādītāji” – uz 4 datu kopām (BSC perspektīvas), kas satur trīs saistošus rādītājus. Apgalvojumi un rādītāji tiek vērtēti pēc Likerta skolas no 1 līdz 5. *Kronbaha alfas* koeficients (*Cronbach's alpha*) tiek aprēķināts atsevišķi kārtas skalām “Domāšanas veidi” un “Sabalansētie rādītāji”. Saskaņā ar veiktajiem aprēķiniem, *Kronbaha alfas* koeficients katrai skalai ir atšķirīgs: skalai “Domāšanas veidi” – 0.822 un skalai “Sabalansētie rādītāji” – 0.866. Aprēķinātie koeficienti rāda augstu datu ticamību. Tas nozīmē, ka dati konsekventi mēra vienu un to pašu koncepciju, tie ir ticami un var tikt izmantoti turpmākajā analizē.

Lai pārbaudītu datu nozīmīgumu un to atbilstību normālajam sadalījumam katrai datu kopai tiek aprēķināts *Šapiro-Vilka tests* (*Shapiro-Wilk test*). Šis tests piemērojams tad, kad tiek pētīta maza izlase, kura ir īpaši jutīga pret novirzēm no normālā sadalījuma, kā arī ir aizdomas par datu asimetriju (van den Berg, 2025). Saskaņā ar *Šapiro-Vilka testa* rezultātiem tikai trīs datu kopas – “Fokusēta domāšana”, “Procesi” un “Izaugsme” atbilst normālajam sadalījumam, jo p-vērtība ir lielāka par 0.05. Pārējās datu kopās ir vērojamas būtiskas novirzes no vidējas vērtības. Saistība ar šo turpmākai datu analīzei tiek izmantotas neparametriskās statistikas metodes.

Lai noskaidrotu pētāmo datu raksturu tiek aprēķinātas aprakstošās statistikas vērtības, tajā skaitā asimetrijas un ekscesa vērtības (Tuychiev, 2023). Saskaņā ar veiktajiem aprēķiniem vairākām datu kopām ir vērojamas lielas vērtības respondentu atbildēs (“drīzāk piekrītu” un “pilnīgi piekrītu”) un tām ir vienmērīgs sadalījums ap vidējo. Visās 5 datu kopās (“Populāra”, “Pašaizliedzīga”, “Fokusēta”, “Procesi”, “Izaugsme”) datu sadalījumam ir kreisās puses asimetrija, un tā liecina par to, ka respondentu atbildēs dominē zemākās vērtības. Savukārt pārējās datu kopās skalas sadalījumam ir labās puses asimetrija, un tas demonstrē augstāko vērtību dominanci.

Pētāmais ekscesa rādītājs ir negatīvs vairākām datu kopām. Negatīvs ekscess norāda uz to, ka pētāmie dati ir vienmērīgi sadalīti ap vidējo. Tostarp lielākās ekscesa vērtības, piemēram, datu kopai “Pašaizliedzīga” var liecināt par bimodālo datu sadalījumu. Tas nozīmē, ka datu kopā ir divas modas, kas apraksta divas dažādas pazīmes, proti, respondentu vidū dominē divi atšķirīgi viedokļi, piemēram, “drīzāk nepiekrītu” un “drīzāk piekrītu”. Augsta pozitīva ekscesa vērtība datu kopai “Uz rezultātu orientēta” (3.453) nozīmē, ka respondentu atbildes nav vienmērīgi sadalītas, bet koncentrētas šaurā apgabalā, ko veido lielākas vērtības (“drīzāk piekrītu”), un ar dažām būtiskām novirzēm.

Spīrmena rangu korelācijas koeficients starp vadītāju domāšanas veidiem un vadītāju galvenajiem raksturlielumiem

Domāšanas veids	Vadības līmenis organizācijā	Profesionālās sagatavotības līmenis	Darba pieredze vadītāja amatā	Līdzdalība lēmumu pieņemšanā
Plaša skatījuma	-0.468 (0.001)	-	-	-0.454 (0.001)
Radoša	-0.354 (0.010)	-	-	-
Reālistiska	-	0.364 (0.008)	-	-
Stratēģiska	-	-	-	-0.378 (0.006)

Avots: autoru aprēķini IBM SPSS Statistics programmā pēc Volk-Jesussek, 2025

Piezīme: “-” nozīmē korelācijas, kurām netika konstatēta statistiski nozīmīga sakarība atbilstoši nosacījumiem: $|r| > 0.3$, $p < 0.05$.

Datu analīze liecina par to, ka starp dažiem domāšanas veidiem un vadītāju personīgiem raksturlielumiem pastāv mērena vai stipra sakarība. Visciešākā un negatīva sakarība ir vērojama starp vadības līmeni organizācijā un plaša skatījuma domāšanu (-0.468, $p < 0.001$). Tas nozīmē, ka ar 99% varbūtību savstarpēja sakarība starp mainīgajiem ir statistiski nozīmīga un pastāv ārkārtīgi zema varbūtība nejauši iegūt tādu pašu korelāciju. Tātad jo zemāka ir vadības līmeņa vērtība (1=augstākais), jo lielākā ir vērtība plaša skatījuma domāšanai.

Tāpat cieša un negatīva sakarība ir vērojama starp vadītāja līdzdalību lēmumu pieņemšanā un plaša skatījuma domāšanu (-0.454, $p < 0.001$). Tātad jo zemāka ir līdzdalības lēmumu pieņemšanā vērtība (1=tiešā iesaiste), jo lielākā ir vērtība plaša skatījuma domāšanai.

Turklāt vāja, bet nozīmīga sakarība ir vērojama arī starp vadības līmeni un radošo domāšanu (-0.354, $p < 0.010$). Tas nozīmē, ka ar 95% varbūtību šī sakarība starp mainīgajiem ir statistiski nozīmīga un pastāv tikai 5% varbūtība nejauši iegūt tādu pašu korelāciju. Tātad jo zemāka ir vadības līmeņa vērtība (1=augstākais), jo lielākā ir vērtība radošai domāšanai.

Pastāv vāja, pozitīva un nozīmīga sakarība starp vadītāja profesionālo sagatavotību un reālistisku domāšanu. Dati liecina par ciešu sakarību starp šiem mainīgajiem (0.364, $p < 0.008$). Tātad jo augstāka ir vadītāja profesionālās sagatavotības līmeņa vērtība (5=doktora grāds), jo lielākā ir vērtība reālistiskai domāšanai.

Pētījuma rezultāti rāda arī ciešu sakarību starp vadītāju līdzdalību lēmumu pieņemšanā un stratēģisku domāšanu. Starp šiem mainīgajiem arī pastāv cieša, bet pretējā sakarība (-0.378, $p < 0.006$), kura skaidro, ka jo zemākā ir vadītāju līdzdalība lēmumu pieņemšanā (1=tiešā iesaiste), jo augstākās ir vērtības stratēģiskai domāšanai.

**Spīrmena rangu korelācijas koeficients starp vadītāju domāšanas veidiem un
sabalansētiem rādītājiem**

Domāšanas veids	Finanses	Klienti	Procesi	Izaugsme
Plaša skatījuma	-	-	0.379 (0.006)	-
Stratēģiska	0.331 (0.017)	-	-	-
Uz rezultātu orientēta	0.407 (0.003)	0.432 (0.001)	-	-

Avots: autoru aprēķini IBM SPSS Statistics SPSS programmā pēc Volk-Jesussek, 2025

Piezīme: “-” nozīmē korelācijas, kurām netika konstatēta statistiski nozīmīga sakarība atbilstoši nosacījumiem: $|r| > 0.3$, $p < 0.05$.

Saskaņā ar 2.tabulas datiem, atklātas pozitīvas un statistiski nozīmīgas sakarības starp pētāmajiem mainīgajiem. Visciešākā sakarība konstatēta starp uz rezultātu orientētu domāšanu un klientu rādītāju (0.432, $p < 0.001$). Tas liecina par to, ka, palielinoties uz rezultātu orientētas domāšanas vērtībai, palielinās arī klientu rādītāja vērtība.

Tāpat statistiski nozīmīga un pozitīva sakarība konstatēta starp uz rezultātu orientētu domāšanu un finansēm (0.407, $p < 0.003$). Tas nozīmē, ka, palielinoties uz rezultātu orientētas domāšanas vērtībai, palielinās arī finanšu rādītāja vērtība. Turklāt statistiski nozīmīga sakarība pastāv arī starp stratēģisku domāšanu un finansēm (0.331, $p < 0.017$). Tas liecina par to, ka, palielinoties stratēģiskās domāšanas vērtībai, palielinās arī finanšu rādītāja vērtība.

Līdzīgi jāinterpretē sakarība starp plaša skatījuma domāšanu un procesu rādītāju: konstatēta pozitīva un statistiski nozīmīga sakarība (0.379; $p < 0.006$). No tā izriet, ka palielinoties plaša skatījuma domāšanas vērtībai, palielinās arī procesu rādītāja vērtība.

Kopumā iegūtie rezultāti liecina, ka atsevišķi vadītāju domāšanas veidi pozitīvi korelē ar noteiktiem sabalansētajiem rādītājiem. Uz rezultātu orientēta domāšana uzrāda sakarību gan ar finanšu, gan klientu rādītāju, stratēģiska domāšana – tikai ar finanšu rādītāju, savukārt plaša skatījuma domāšana – ar procesu rādītāju. Konstatētās statistiski nozīmīgās sakarības neapgalvo, ka konkrēts domāšanas veids tieši izraisa izmaiņas vadības efektivitātē. Tas norāda, ka, mainoties viena mainīgā vērtībai, ir tendence mainīties arī otra mainīgā vērtībai.

Secinājumi

Rezumējot pētījuma rezultātus, jāsecina, ka starp atsevišķiem vadītāju domāšanas veidiem un vadības efektivitātes rādītājiem pastāv statistiski nozīmīgas sakarības. Iegūtie rezultāti ļauj identificēt domāšanas veidus, kuri ir statistiski nozīmīgi saistīti ar noteiktām vadības efektivitātes rādītājiem, tomēr korelācijas analīze neļauj noteikt cēloņsakarību starp pētītajiem mainīgajiem.

Savukārt vadības efektivitātes analīze parādīja, ka uz rezultātu orientēta domāšana ir pozitīvi un statistiski nozīmīgi saistīta gan ar finanšu, gan klientu rādītājiem. Stratēģiska domāšana ir statistiski nozīmīgi saistīta ar finanšu rādītājiem, savukārt plaša skatījuma domāšana ir statistiski nozīmīgi saistīta ar iekšējo procesu rādītājiem.

Pēc konstatētajām statistiski nozīmīgajām sakarībām vadītāju domāšanas veidi dalās šādi:

- finanses – stratēģiska un uz rezultātu orientēta domāšana;
- klienti – uz rezultātu orientēta domāšana;
- iekšējie procesi – plaša skatījuma domāšana;

- mācīšanās un izaugsme – pētījumā nav konstatēta statistiski nozīmīga sakarība ar iepriekš minētajiem domāšanas veidiem.

Pētījuma ierobežojumi. Ierobežotais izlases apjoms (N=52) mazina identificēto kopsakarību statistisko ticamību. Iegūtie dati raksturo tikai konkrēto respondentu loku, pētījuma rezultāti atspoguļo specifisku organizāciju pieredzi un nav vispārināmi uz visu Latvijas organizāciju ģenerālkopu.

Lai izmantotu pētījuma rezultātos konstatētās sakarības vadības praksē, vadītājiem ieteicams mērķtiecīgi attīstīt vairākus savstarpēji papildinošus domāšanas veidus. Tāpat vadītājiem ieteicams ikdienas lēmumu pieņemšanu sasaistīt ar organizācijas ilgtermiņa mērķiem, izvērtēt iespējamās attīstības scenārijus un pieņemt lēmumus, ņemot vērā to iespējamo ilgtermiņa rezultātu. Vienlaikus vadītājiem ieteicams izvairīties no stīvas domāšanas un attīstīt elastīgu pieeju lēmumu pieņemšanai, izmantojot kritisku analīzi, ideju ģenerēšanu, eksperimentēšanu un refleksiju.

Šādu pieeju izmantošana ļauj papildināt uz rezultātu, stratēģisku un plaša skatījuma domāšanu ar spēju pielāgoties mainīgiem apstākļiem. Būtiska ir arī nepārtraukta mācīšanās, informācijas kritiska izvērtēšana un pārbaudītu informācijas avotu izmantošana. Ņemot vērā, ka pētījumā analizētie domāšanas veidi ir savstarpēji papildinoši, vadītājiem ieteicams veidot daudzveidīgas darba komandas, kurās tiek izmantoti atšķirīgi domāšanas veidi un pieredze. Tas var veicināt plašāku situācijas izvērtējumu un kvalitatīvāku lēmumu pieņemšanu.

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Types of managerial thinking and their relationship to management effectiveness

Summary

Modern managers face the need to make decisions amidst uncertainty and constant challenges. In an era of change, a manager's thinking becomes a driving force for the entire organization, forming the foundation for responsible decisions and innovative action. The aim of this study is to examine the relationship between managers' thinking and management effectiveness. To achieve this goal, a survey of managers in Latvian organizations was conducted (N=52). The research problem stems from the fact that traditional management models are losing their effectiveness today; instead, the ability to think strategically, systemically, and flexibly – including the capacity to perceive interconnections, anticipating consequences, and creating new meaning – is coming to the fore. The study's novelty lies in its examination of managerial thinking, revealing its importance in responding flexibly to environmental challenges and its strong link to indicators of managerial effectiveness. Furthermore, no similar study has been conducted previously. The results indicate a statistically significant relationship between managers' thinking and managerial effectiveness.

Keywords: types of thinking, John Maxwell, Balanced Scorecard, effectiveness, relationship.

THE IMPACT OF PSYCHOLOGICAL STRESS ON THE COMPETITIVE PERFORMANCE OF COLLEGIATE SWIMMERS

Abstract. This study examines the effects of changes in psychological stress on the competitive performance of collegiate swimmers, a distinctive group pursuing dual careers in sport and education. Collegiate swimmers must balance academic demands with intensive training and competition preparation. However, most existing research focuses on professional athletes or treats student-athletes as a broad category, leaving collegiate swimmers insufficiently studied. Drawing on research on cognitive appraisal, competitive anxiety, student-athlete mental health, and dual-career development, this study primarily employs literature analysis and logical reasoning to integrate cognitive appraisal theory with the dual-career context of collegiate swimming. It systematically identifies major sources of stress, explains their effects on swimming performance, and proposes practical management strategies. The findings suggest a relationship between psychological stress and collegiate swimmers' competitive performance: moderate stress can enhance attentional focus and competitive readiness, whereas excessive stress can disrupt breathing regulation, stroke efficiency, turning technique, and pacing control. Effective stress regulation among collegiate swimmers therefore requires coordinated efforts by athletes, coaches, and universities to establish a systematic stress management framework.

Keywords: collegiate swimmers; psychological stress; competitive performance; cognitive appraisal theory; dual careers; stress management.

Introduction

The development of university sport has made higher education institutions important settings for nurturing competitive athletes. Collegiate swimmers are a typical dual-career group, pursuing academic progress while striving to improve their competitive performance. This dual role can benefit their personal development, as higher education helps strengthen their thinking and learning skills, self-regulation and long-term career planning. However, it also increases their stress burden: academic deadlines, examinations, credit requirements and preparations for employment often coincide with intensive training cycles or preparations for major competitions.

Research has shown that academic and athletic stressors interact and should therefore be monitored together rather than considered separately (Lopes Dos Santos et al., 2020). Swimming is particularly sensitive to psychological fluctuations. A slower reaction at the start, an unstable turn, a disrupted breathing rhythm or inappropriate pacing can affect finishing times and ultimately influence competition outcomes. Psychological stress is therefore more than an emotional concern; it is also a key factor that directly affects competitive performance. Systematic reviews of student-athlete mental health emphasize that dual-career demands, resilience, coping styles and social support are closely associated with athletes' physical and psychological well-being and competitive performance (Kegelaers et al., 2022; Aalto et al., 2024).

The development of university sport has made higher education institutions important environments for cultivating competitive athletes. Collegiate swimmers are a typical dual-career group because they pursue academic progress and athletic achievement at the same time. This dual role is valuable: university education can improve reflection, self-control and long-term career planning. However, it also increases pressure. Academic deadlines, examinations, credit requirements and employment preparation may occur during intensive training or before important competitions. Recent research confirms that academic and athletic stressors interact and should be monitored together rather than separately (Lopes Dos Santos et al. 2020).

Swimming is especially sensitive to psychological fluctuation. A start that is slightly slow, a turn that is technically unstable, a disrupted breathing rhythm or an inappropriate

pacing decision can change the final result by fractions of a second. For this reason, psychological stress is not only an emotional issue but also a performance factor. Systematic reviews of student-athlete mental health emphasize that dual-career demands, resilience, coping style and social support are closely related to well-being and performance (Kegelaers et al. 2022; Aalto et al. 2024).

Collegiate swimmers must meet the dual demands of academic study and intensive athletic training, meaning that fluctuations in psychological stress may affect their competitive performance in complex ways. Although previous research has examined stress and competitive anxiety among athletes and student-athletes, the specific stress characteristics of collegiate swimmers, the mechanisms through which psychological stress affects swimming performance, and stress management strategies tailored to this population remain insufficiently understood. This study aims to analyse the impact of fluctuations in psychological stress on collegiate swimmers' competitive performance. Its specific objectives are as follows:

1. To identify the main sources and typical manifestations of psychological stress among collegiate swimmers;
2. To examine the physiological, technical, tactical and cognitive pathways through which psychological stress influences competitive performance;
3. To analyse, based on existing literature, the potential nonlinear relationship between psychological stress and competitive performance, examining performance characteristics under insufficient, moderate and excessive stress, and the conditions under which these patterns may occur;
4. To propose practical stress management recommendations at the athlete, coaching and institutional levels, tailored to collegiate swimmers, coaches and university administrators.

The study uses a qualitative theoretical design. Literature analysis was applied to classical and recent studies on stress appraisal, competitive anxiety, student-athlete mental health and dual-career development. Logical analysis was used to build the chain “stressors - cognitive appraisal - coping behavior - competitive performance”. The paper does not report a large-scale statistical survey, its conclusions should be interpreted as analytical findings requiring further empirical testing.

Theoretical Background

Cognitive appraisal theory provides the main explanatory framework. Stress is not produced only by an external event; it also depends on whether an athlete interprets the event as a threat, a challenge or a manageable demand (Lazarus and Folkman 1984). In primary appraisal, a swimmer evaluates the meaning of the situation; in secondary appraisal, the swimmer evaluates available coping resources such as technical preparation, coach support, academic flexibility and previous competition experience. The same final may therefore be viewed as an opportunity for a personal best or as a threat to scholarship status and self-worth.

The inverted-U principle also helps explain performance changes. Very low arousal may reduce motivation, moderate arousal can improve readiness, and excessive arousal can impair control and decision-making (Yerkes and Dodson 1908). Meta-analytic evidence on competitive anxiety shows that anxiety may be associated with poorer performance when it disrupts confidence, attention and execution (Craft et al. 2003). In the collegiate context, these processes become more complex because academic concerns can remain active during training and competition.

Recent studies have shifted from isolated competition anxiety to the broader environment of student-athletes. Lopes Dos Santos et al. (2020) reviewed stressors and monitoring strategies in collegiate athletes. Kegelaers et al. (2022) highlighted the dual-career context in student-athlete mental health. NCAA reports show that overwhelm, mental exhaustion and academic pressure remain important concerns (NCAA 2023). More recent reviews also recommend integrated support systems connecting academic, athletic and psychological resources (Aalto et al. 2024; De Maio et al. 2025; Mao et al. 2025).

These theoretical perspectives and previous studies provide a basis for analysing the sources of psychological stress among collegiate swimmers and the physiological, technical-tactical and cognitive pathways through which stress may influence competitive performance.

Research Results

Psychological stress among collegiate swimmers can be understood in terms of external demands, performance-related concerns and individual factors that shape stress appraisal and coping. External demands may include institutional expectations, competitive rankings, opponents' abilities, coaches' evaluations and academic assessments. Performance-related concerns may arise from stalled improvements in personal-best times, inadequate recovery or uncertainty about technique. Academic and athletic demands can overlap, making their combined effects particularly relevant to collegiate athletes (Lopes Dos Santos et al., 2020). Individual appraisal and coping processes help explain why athletes respond differently to similar demands (Lazarus and Folkman, 1984). These sources and responses should be distinguished from the psychological states experienced before and during competition. Table 1 summarizes selected states relevant to stress management, their illustrative manifestations and their potential implications for swimming performance (see Table 1).

Table 1.

Types of psychological stress and their possible effects on collegiate swimmers

Psychological state and supporting literature	Illustrative manifestations	Potential implications for swimming performance
Excessive tension / somatic anxiety (Craft et al. 2003)	Heightened bodily tension, perceived rapid heartbeat and difficulty relaxing before competition.	May interfere with relaxed stroke execution and breathing rhythm. Its relationship with performance varies across athletes and competitive contexts.
Under-arousal relative to individual needs (Raglin et al. 1990)	Feeling insufficiently activated or mentally ready compared with the athlete's usual state before successful performances.	May compromise race readiness and the execution of planned effort. Low anxiety alone does not indicate inadequate readiness; optimal pre-competition states differ between athletes.
Pre-competition cognitive anxiety (Craft et al. 2003; Eysenck et al., 2007)	Persistent worry about results, fear of mistakes and difficulty maintaining task-focused attention.	May divert attention from race-relevant cues, potentially affecting start preparation, turn execution and pacing decisions. Performance may be maintained through compensatory effort.

Psychological state and supporting literature	Illustrative manifestations	Potential implications for swimming performance
Overconfidence (Woodman et al. 2010; indirect conceptual support)	Confidence that exceeds realistic assessments of current ability or race demands; possible underestimation of weaknesses and preparation needs.	May encourage unrealistic pacing targets or insufficient adjustment of race plans. These are proposed swimming-specific implications, rather than effects directly demonstrated by the cited study.

Source: compiled by the author based on literature analyses.

Note: The categories are illustrative and may overlap; they do not constitute a validated classification of psychological stress. The cited literature provides theoretical or empirical background, while the swimming-specific implications represent the author's interpretation and require further investigation in collegiate swimmers. Raglin et al. (1990) studied female high school swimmers, and Woodman et al. (2010) examined a rope-skipping task.

Psychological stress affects competitive performance through three interconnected pathways. First, stress influences physiological arousal. The relationship between arousal and performance is supported by the inverted-U principle proposed by Yerkes and Dodson (1908), according to which very low arousal may be insufficient for optimal performance, whereas excessive arousal may impair performance. Craft et al. (2003) similarly demonstrated through meta-analytic evidence that competitive anxiety can be associated with poorer sport performance when it interferes with effective execution. Applied to collegiate swimming, moderate arousal may facilitate alertness, readiness and reaction sensitivity, whereas excessive stress may be accompanied by muscular tension, disturbed breathing and unnecessary energy expenditure. Such responses can reduce movement efficiency; for example, excessive muscular tension may contribute to an increased stroke frequency combined with a shortened stroke length, producing greater effort without a corresponding increase in propulsion.

Second, stress can weaken technical and tactical stability. Research on competitive anxiety indicates that elevated anxiety can negatively influence sport performance when it interferes with confidence, attention and movement execution (Craft et al. 2003). In addition, impaired attentional control under anxiety may reduce the athlete's ability to regulate sport-specific actions efficiently (Wilson et al. 2009). In swimming, where performance depends on the stable coordination of repeated technical movements, excessive pressure may therefore result in stiffer or less consistent execution, disturbed stroke continuity and reduced efficiency. Tactical performance may also be affected. For example, a swimmer who is overly concerned about falling behind may begin the race too quickly and lose speed during the later stages, whereas an athlete who underestimates competitive demands may deviate from the planned pacing strategy. These responses illustrate how psychological stress can influence not only individual movements but also the execution of the overall race plan.

Third, stress influences attention and decision-making. Wilson et al. (2009) showed that anxiety can impair visual attentional control in sport, while Craft et al. (2003) also identified attention and execution as important factors in the relationship between competitive anxiety and performance. This mechanism is particularly relevant to swimming because swimmers must process multiple task-related cues within a limited period, including the start signal, lane position, breathing rhythm, turn distance and pacing information. Under excessive anxiety, attention may become increasingly directed toward threat-related thoughts or possible errors. For example, excessive concern about avoiding a false start may reduce attention to other relevant cues. As a result, ineffective attentional control may

contribute to delayed reactions, poorly timed turns, disrupted pacing and less efficient decision-making during competition.

Taken together, these findings indicate that the relationship between psychological stress and competitive performance is nonlinear. Consistent with the inverted-U principle (Yerkes and Dodson 1908), very low levels of stress or arousal may result in insufficient mobilization, while moderate levels may enhance attention, readiness and competitive engagement. In contrast, excessive stress may disrupt physiological regulation, technical and tactical stability, attentional control and decision-making. In the collegiate swimming context, the optimal stress level is also likely to vary according to factors such as event distance, technical maturity, resilience, academic workload and previous competition experience. Therefore, the influence of psychological stress should not be understood simply as either positive or negative; rather, its effect depends on the level of stress, the athlete's cognitive appraisal and the resources available for coping with both academic and competitive demands.

Stress regulation among collegiate swimmers should address both academic and athletic demands through three main approaches: improving cognitive appraisal, regulating physical and psychological states, and strengthening external support. The aim is to help athletes identify sources of stress, recognize their own stress responses and adapt their coping strategies to different training and competition contexts, keeping stress within a range conducive to their individual optimal performance.

Cognitive regulation focuses on how athletes interpret and evaluate stressful events. According to cognitive appraisal theory, the same task may be perceived as either a threat or a challenge, depending on the athlete's assessment of its demands and the resources available to cope with them (Lazarus and Folkman, 1984). Cognitive regulation therefore involves identifying negative or unbalanced appraisals and redirecting excessive concern about competition outcomes towards controllable aspects of the immediate task, thereby strengthening athletes' sense of agency in managing stress.

Regulating physical and psychological states involves coordinating physiological arousal, emotional experiences and recovery. The states athletes need for effective preparation vary across individuals, events and competition phases, so regulation strategies should be adjusted according to personal experience and actual responses. Academic stress, training load and recovery conditions should also be considered together, rather than treating psychological stress separately from daily study and training arrangements (Lopes Dos Santos et al. 2020). External support provides an essential foundation for stress regulation. Athletes' individual coping efforts, coaches' training management and universities' institutional arrangements together form a stress management system. Communication and resource coordination among these three groups can help student-athletes identify conflicts between academic and athletic demands in a timely manner and create favourable conditions for sustained stress regulation.

Conclusions and Recommendations

Conclusions. Based on literature analysis and logical reasoning, this study draws the following conclusions regarding the impact of variations in psychological stress on collegiate swimmers' competitive performance.

First, collegiate swimmers experience psychological stress primarily from the athletic and academic domains, which are closely intertwined. Demands related to competition results, coaches' expectations, academic assessments, career planning and peer attention may converge during the same period, increasing athletes' stress burden. Analyses of stress

in this population therefore need to consider the demands associated with both their student and athlete roles.

Second, psychological stress may influence swimming performance through physiological, technical, tactical and cognitive pathways. Moderate stress can help mobilize attention and competitive readiness, whereas stress overload may be accompanied by muscle tension, disrupted breathing rhythms, reduced movement coordination, and difficulties with pacing and attentional control. The relationship between stress and performance may be nonlinear, but suitable stress levels differ between individuals and depend on the competitive context.

Third, collegiate swimmers' dual role offers valuable support for their development while also creating conflicts between academic study and athletic training. Higher education can support the development of rational appraisal, self-reflection and long-term career planning. However, overlapping academic deadlines and training demands may restrict sleep and recovery time, affecting concentration and engagement in training. Sustainable dual-career development therefore requires both individual coordination skills and external support.

Fourth, effective stress management among collegiate swimmers requires collaboration among athletes, coaches and universities. Aligning individual coping skills, training arrangements and institutional support can help athletes balance competitive performance, mental health and academic development.

Recommendations. At the athlete level, stress management should become part of everyday practice. Swimmers can use a stress diary to record stressful events, automatic thoughts, emotional experiences, physical responses and coping actions, gradually identifying patterns in their stress responses. Cognitive restructuring can then help translate outcome-focused worries into specific, actionable task cues. For example, "I must not lose" can be reframed as "I will control my start, maintain my stroke length and execute my turn plan."

Athletes should also develop weekly schedules that coordinate academic tasks, training, recovery and competition preparation, while regularly practising breathing regulation, progressive muscle relaxation and pre-competition routines. At the coach level, psychological stress monitoring and regulation should be incorporated into daily training and competition preparation. Coaches should clearly communicate training cycle plans, competition goals and selection criteria to reduce uncertainty. Competition simulations should be adapted to athletes' readiness, incorporating warm-up procedures, starting commands and lane conditions while providing opportunities to practise coping with competitive pressure.

Communication should be tailored to individual needs, offering emotional support or specific technical and pacing cues. Coaches should also monitor athletes' sleep, mood, training quality and academic workload. When stress arises primarily from academic demands, training and recovery arrangements should be reviewed together to avoid increasing training loads at the expense of recovery. At the institutional level, universities should establish coordinated support mechanisms for student-athletes, promoting communication and collaboration among academic affairs offices, sports departments, coaches, psychological counsellors and medical staff.

Flexible academic arrangements, tutoring, examination coordination and early identification of stress-related difficulties can help ease conflicts between study and training. Mental health services should be accessible and supported by clear confidentiality policies, enabling athletes to receive appropriate assistance promptly. In line with student-athlete health guidance, universities should integrate mental health into their overall athlete health support systems and sustain this commitment through institutional support (NCAA, 2021; NCAA, 2023).

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Psiholoģiskā stresa ietekme uz studentu komandu peldētāju sacensību rezultātiem

Kopsavilkums

Augstākās izglītības un sacensību sporta integrācijas apstākļos koledžas peldētāji vienlaikus pilda studenta un sportista lomu. Raksta mērķis ir analizēt psiholoģiskā stresa avotus, izpausmes un ietekmi uz peldētāju sacensību sniegumu. Pētījuma uzdevumi ir raksturot teorētisko pamatu, noteikt galvenos stresa veidus, izskaidrot fizioloģiskos, tehniski taktiskos un kognitīvos ietekmes mehānismus un piedāvāt regulēšanas stratēģijas. Secināts, ka mērens stress var paaugstināt mobilizāciju un koncentrēšanos, savukārt pārmērīgs stress traucē elpošanas ritmu, tehnikas stabilitāti, taktisko lēmumu pieņemšanu un uzmanības kontroli. Efektīva regulēšana prasa sportista, trenera un universitātes sadarbību.

Atslēgas vārdi: koledžas peldētāji; psiholoģiskais stress; sacensību sniegums; stresa regulēšana; duālā karjera.

ATKARĪBU RISKI UN PROFILAKSE DARBA VIDĒ ORGANIZĀCIJAS KULTŪRAS KONTEKSTĀ

Kopsavilkums. Raksts balstīts naratīvā literatūras pārskatā un sekundārajā statistisko datu analīzē, izmantojot starptautisko organizāciju un Latvijas institūciju ziņojumus par vielu (alkohols, tabaka, opioīdi) un uzvedības atkarībām darba vidē. Analīzē īpaša uzmanība pievērsta organizācijas kultūras konceptuālajiem modeļiem un psihosociālajam drošības klimatam (PSC) kā būtiskiem darba vides veselības un atkarību risku noteicējiem.

Raksta mērķis ir analizēt saistību starp organizācijas kultūras iezīmēm un atkarību riska līmeni darbinieku vidū, identificējot galvenos riska un aizsargfaktoros, izstrādājot ieteikumus efektīvai profilaksei darba vietā. Balstoties literatūrā, rakstā akcentēta integrēta profilakses pieeja, kas ietver skaidras organizācijas politikas par vielu lietošanu, agrīnu riska atpazīšanu un konfidencialas atbalsta sistēmas (SBIRT, EAP), psihosociālā drošības klimata stiprināšanu un regulāru darba vides monitoringu. Tas uzsvēr organizācijas kultūras nozīmi kā būtisku preventīvu mehānismu psihosociālo risku un atkarību mazināšanā.

Starptautisko pētījumu un epidemioloģisko datu sintēze ļauj analizēt atkarību riskus organizācijas kultūras kontekstā, vienlaikus salīdzinot globālās un Eiropas tendences ar Latvijas situāciju. Rezultāti norāda, ka toksiska, hierarhiski sodoša un pārmērīga snieguma kultūra palielina psihoaktīvo vielu lietošanas un uzvedības atkarību risku, savukārt atbalstoša, līdzdalīga un PSC orientēta organizācijas kultūra darbojas kā nozīmīgs aizsargfaktors.

Atslēgas vārdi: atkarības, atkarību profilakse, psihosociālie riska faktori, veselības veicināšana darba vietā, organizācijas kultūra, darbinieku labbūtība

Ievads

Atkarības darba vidē kļūst par arvien nozīmīgāku sabiedrības veselības un organizāciju vadības problēmu, kas ietekmē gan darbinieku veselību, gan organizāciju efektivitāti. Psihoaktīvo vielu lietošana (alkohols, tabaka, opioīdi) un uzvedības atkarības, piemēram, darbaholisms vai digitālā atkarība, bieži ir saistītas ar darba vides psihosociālajiem apstākļiem un organizācijas kultūru (WHO 2022; EUDA 2023; OECD 2023). Pētījumi liecina, ka augsts darba stress, neskaidras lomas, pārmērīga darba slodze un zems sociālais atbalsts var palielināt atkarību risku darbinieku vidū (Frone 2016; Eurofound 2023).

Organizācijas kultūra tiek uzskatīta par būtisku darba vides veselības determinantu, kas ietekmē darbinieku uzvedību, attieksmi pret veselību un sociālās normas darba kolektīvā (Denison & Mishra 1995; Cameron & Quinn 2011). Īpaša nozīme tiek piešķirta psihosociālajam drošības klimatam (Psychosocial Safety Climate, PSC), kas raksturo organizācijas vadības prioritātes attiecībā uz darbinieku psiholoģisko drošību un labbūtību (Dollard & Bakker 2010). Organizācijās ar augstu PSC līmeni tiek novērots zemāks psihosociālo risku un ar darbu saistīto veselības problēmu līmenis.

Tomēr līdzšinējā literatūrā psihoaktīvo vielu lietošana, uzvedības atkarības un organizācijas kultūra bieži tiek analizētas atsevišķi. Nepieciešama integrēta pieeja, kas ļautu analizēt šos procesus vienotā analītiskā ietvarā, sasaistot individuālos veselības riskus ar organizācijas kultūras un vadības prakses īpatnībām.

Raksta mērķis ir analizēt saistību starp organizācijas kultūras iezīmēm un atkarību riska līmeni darbinieku vidū, identificējot galvenos riska un aizsargfaktoros, izstrādājot ieteikumus efektīvai profilaksei darba vietā.

Izmantotās pētījuma metodes:

naratīvais literatūras pārskats – zinātniskās literatūras analīzei par organizācijas kultūru, psihosociālo drošības klimatu, vielu un uzvedības atkarībām un to profilaksi darba vidē;

sekundārā statistisko datu analīze – starptautisko organizāciju un Latvijas institūciju publicēto statistikas datu un ziņojumu analīzei par atkarību izplatību un ar darba vidi saistītajiem riska faktoriem;

salīdzinošā analīze un informācijas sintēze – starptautisko, Eiropas un Latvijas datu salīdzināšanai un organizācijas kultūras riska un aizsargfaktoru identificēšanai.

Teorētiskā daļa

1. Atkarību izplatība darba vidē un organizācijas kultūra: Eiropas un Latvijas pieredze

Eiropas pētījumi liecina, ka aptuveni 5–20 % darbinieku var būt pakļauti riskam lietot alkoholu problemātiskā līmenī, un šo risku būtiski ietekmē darba vietas sociālās normas un vadības attieksme (Bonsaksen & Skogen 2022; EUDA 2023; Thørrisen et al. 2022). Organizācijās, kur alkohola lietošana ir sociāli pieļauta un integrēta neformālo pasākumu kultūrā, darbinieku atkarības risks ir augstāks. Savukārt uzņēmumos ar skaidru veselības veicināšanas politiku novērojams zemāks alkohola lietošanas risks un labvēlīgāki darba drošības rādītāji (WHO 2022; EU-OSHA 2024).

Papildus vielu atkarībām Eiropas darba vidē nozīmīgu izaicinājumu rada uzvedības atkarības, īpaši darbaholisms. Tā izplatība dažādās nozarēs svārstās no 1,5 % līdz 44,9 %, atkarībā no darba organizācijas, veikspējas prasībām un dominējošās darba kultūras (Andersen et al. 2023; Atroszko et al. 2023). Pētījumi norāda, ka konkurences un pastāvīga snieguma spiediena kultūra veicina darba atkarības, izdegšanas un psihiskās veselības traucējumu risku (OSH Wiki 2024; EU-OSHA 2025).

Kopumā Eiropas un Latvijas konteksts apliecina, ka atkarību izplatība darba vidē ir cieši saistīta ar organizācijas kultūras normām, vadības praksi un darba vides psihosociālo kvalitāti. Tas uzsver organizācijas kultūras nozīmi kā būtisku riska vai aizsargfaktoru atkarību attīstībā un profilaksē.

Pētījumos īpaša uzmanība pievērsta PSC koncepcijai, kas raksturo organizācijas politiku, praksi un procedūras darbinieku psihiskās veselības aizsardzībai (Dollard & Bakker 2010). Empīriskie pētījumi liecina, ka organizācijās ar augstu PSC līmeni darbinieki izjūt lielāku uzticēšanos un psiholoģisko drošību, retāk izmanto psihoaktīvās vielas vai kompulsīvu uzvedību kā stresa mazināšanas mehānismu, kā arī šādās darba vidēs tiek konstatēts zemāks izdegšanas un atkarību risks (EU-OSHA 2025; Eurofound 2023).

Eiropas un Latvijas statistiskie dati kopumā apliecina, ka atkarības darba vidē jāuztver kā kompleksa biopsihosociāla parādība, kuras veidošanos ietekmē ne tikai individuālie faktori, bet arī organizācijas kultūra, vadības prakses un psihosociālā darba vide. Šie secinājumi uzsver nepieciešamību integrēt atkarību profilaksi organizācijas kultūras, darba aizsardzības un personālvadības politikās.

2. Atkarību veidi un to izpausmes darba vidē

Atkarība ir biopsihosociāls fenomens, kura veidošanā mijiedarbojas bioloģiskie, psiholoģiskie un sociālie faktori (Panksepp & Biven 2012; Albrekte u.c. 2021a). Bioloģiskajā līmenī nozīmīga ir dopamīna un opioīdu sistēmu disregulācija, kas veicina kompulsīvu vielu lietošanu vai uzvedības atkārtšanu. Psiholoģiskie faktori ietver pašregulācijas grūtības un emocionālās regulācijas traucējumus, savukārt sociālie aspekti saistīti ar ģimenes vidi, darba stresoriem un kultūras normām (Panksepp & Biven 2012).

Psihodinamiskajā skatījumā atkarība tiek interpretēta kā aizsardzības mehānisms pret trauksmi, emocionālu tukšumu vai afektu regulācijas grūtībām. Šādos gadījumos vielu lietošana vai kompulsīva uzvedība kalpo kā “pašārstēšanās” stratēģija, kas īslaicīgi mazina

diskomfortu, bet ilgtermiņā palielina psihosociālos riskus un funkcionēšanas traucējumus (Yalisove 1989; Khantzian 2015; Goodman 2019).

Atkarības iedala vielu atkarībās (alkohols, nikotīns, narkotikas, medikamenti) un uzvedības atkarībās (azartspēles, internets, darbs, iepirkšanās, ēšanas traucējumi) (Albrekte u.c. 2021a). Darba vidē šo atkarību izplatību būtiski ietekmē nozares specifika, darba organizācija un organizācijas kultūra.

Latvijā alkohola patēriņš (12,9 litri absolūtā alkohola uz vienu iedzīvotāju gadā) un bīstamas lietošanas izplatība (ap 22 %) rada nozīmīgus riskus sabiedrības veselībai un darbaspējām (OECD/WHO 2022; SPK 2023). Paaugstināts risks novērojams nozarēs ar augstu fizisko un emocionālo slodzi, piemēram, veselības aprūpē un būvniecībā. Smēķēšanas izplatība Latvijā sasniedz aptuveni 27 % pieaugušo, īpaši darbaspējas vecuma vīriešu vidū (SPKC, 2023). Medikamentu atkarība, īpaši benzodiazepīnu lietošana, biežāk sastopama veselības aprūpes jomā, kur emocionālais izsīkums kombinējas ar zāļu pieejamību (Albrekte u.c. 2021b).

Mūsdienu darba vidē arvien nozīmīgākas kļūst arī uzvedības atkarības, īpaši darbaholisms, digitālā atkarība un azartspēles, kas biežāk sastopamas augstas veiktspējas un tehnoloģiju sektoros (Schaufeli et al. 2008; Gonçalves et al. 2023; Tang 2025). Darbaholismu raksturo kompulsīva iesaiste darbā, kas saistīta ar izdegšanu, miega traucējumiem, trauksmi, depresiju un starppersonu konfliktiem (Clark et al. 2016; Kim et al. 2020; She et al. 2024).

Šie dati liecina, ka atkarību izplatība darba vidē nav reducējama tikai uz individuālām izvēlēm, bet ir cieši saistīta ar darba vides struktūru un organizācijas kultūras raksturu. Autoru ieskatā organizācijas kultūra var darboties gan kā risks, gan kā aizsargfaktors, nosakot, vai darbinieki izmanto destruktīvas pašregulācijas stratēģijas vai saņem atbalstu veselīgākai stresa pārvarēšanai. Tādēļ atkarību profilakse darba vidē jāskata kā integrēta organizācijas kultūras un darba vides pārvaldības sastāvdaļa.

2.1. Riska faktori darba vidē

Atkarību veidošanos darba vidē ietekmē gan individuālie faktori (piem., trauksmainība, zems pašvērtējums, impulsivitāte), gan organizācijas kultūra un darba vides psihosociālie apstākļi. Pētījumi kā nozīmīgākos riska faktoros identificē hronisku stresu un pārmērīgu darba slodzi, neskaidru vai toksisku organizācijas kultūru, zemu sociālo atbalstu kolektīvā, maiņu darbu ar izjauktu diennakts ritmu, kā arī psiholoģisku vardarbību, mobingu un izdegšanu (Eurofound 2023; Saravanan et al. 2025).



1.attēls Darba vides riska faktori

Avots: autoru veidots attēls pēc Dollard & Bakker 2010; WHO 2022, 2024; EU-OSHA 2025; Vargas-Martínez et al. 2021; Foncubierta-Rodríguez et al. 2024; Proper & van Oostrom 2019; Ng et al. 2024; Sussman et al. 2023

Šādi darba vides apstākļi veicina emocionālu izsīkumu un profesionālu distresu, kas savukārt palielina risku izmantot vielas vai kompulsīvu uzvedību kā neadaptīvu pašregulācijas mehānismu (Albrekte u.c. 2021a). Līdz ar to atkarības darba vidē nav reducējamas tikai uz individuālu izvēli vai “rakstura vājumu”, bet atspoguļo arī organizācijas kultūras, vadības prakses un strukturālās vides kvalitāti.

3. Organizācijas kultūra un atkarību riska līmenis

Atkarību problemātika darba vidē Latvijā ir nepietiekami pētīta, tomēr pieejamie dati par smēķēšanu un alkohola lietošanu norāda uz būtisku ietekmi uz darbinieku veselību, darbaspējām un organizāciju efektivitāti (SPKC 2023; OECD/WHO 2022; OECD 2023).

Latvijā ikdienas smēķētāju īpatsvars sasniedz ap 27 %, kas pārsniedz ES vidējo rādītāju (23 %), īpaši vīriešu vidū (ap 40 %) (SPKC 2023). Smēķēšana palielina slimības dienu skaitu un darba kavējumus, samazinot produktivitāti (Weng et. Al. 2013; Troelstra 2020 et al.; Coenen et al. 2020).

Alkohola patēriņš Latvijā ir viens no augstākajiem ES – vidēji 12,9 litri absolūtā alkohola uz iedzīvotāju gadā, un aptuveni 22 % populācijas alkoholu lieto bīstamā līmenī (OECD/WHO 2022; SPKC 2023). Pārmērīga alkohola lietošana palielina nelaimes gadījumu, darba kavējumu un snieguma samazināšanās risku (Thørrisen et al. 2019; Eurofound, 2023).

Kopumā šie rādītāji norāda, ka smēķēšana un alkohola lietošana Latvijā ietekmē ne tikai individuālo veselību, bet arī darba vidi, darba drošību un organizāciju produktivitāti (OECD 2023; Eurofound 2023).



2.attēls. Tabakas un alkohola lietošanas rādītāji Latvijā un Eiropas Savienībā (2022–2023)

Avots: autoru veidots attēls pēc SPKC 2023; OECD/WHO 2022; Eurofound 2023); EUD 2023; Eurostat 2022

Analizējot darbaspējas vecuma iedzīvotājus Latvijā (15–64 gadi; $n \approx 1\,158\,826$), redzams, ka vairāk nekā puse saskaras ar vismaz vienu riska uzvedības formu – ikdienas smēķēšanu, bīstamu alkohola lietošanu vai epizodisku pārmērīgu alkohola lietošanu (Centrālā statistikas pārvalde 2025). Tabakas un alkohola lietošanas tiešās un netiešās izmaksas pārsniedz 2,5 % no iekšzemes kopprodukta, radot būtisku ekonomisko slogu sabiedrībai un darba devējiem (Goodchild et al. 2018; OECD 2023; Manthey et al. 2021).

Šie rādītāji norāda, ka atkarību profilakse ir ne tikai sabiedrības veselības, bet arī organizāciju produktivitātes un ekonomiskās ilgtspējas jautājums. Autoru skatījumā darba vide var darboties gan kā riska, gan kā aizsargfaktors: organizācijās ar strukturētām veselības veicināšanas programmām, elastīgu darba organizāciju un atklātu komunikāciju novērojams zemāks atkarību risks, augstāka darbinieku noturība un labāki labbūtības rādītāji (WHO

2022; Verra et al. 2019; Proper & van Oostrom, 2019). Tas uzsver organizācijas kultūras nozīmi kā stratēģisku instrumentu darbinieku veselības un darba spēju saglabāšanā.

4. Organizācijas kultūras loma darbinieku atkarību profilaksē

Organizācijas kultūra ir kopīgs vērtību, normu un uzvedības modeļu kopums, kas ietekmē lēmumu pieņemšanu un darbinieku uzvedību (Schein 2017). Tā būtiski ietekmē darbinieku emocionālo līdzsvaru, motivāciju un veidus, kā tiek pārvarēts stress.

Pētījumi liecina, ka autoritāra un zemu uzticēšanos veicinoša kultūra korelē ar paaugstinātu stresa, izdegšanas un atkarību risku (Denison & Mishra 1995; Saravanan et al. 2025). Savukārt atbalstoša un iesaistoša kultūra darbojas kā aizsargfaktors pret neadaptīvām pārvarēšanas stratēģijām, tostarp atkarību uzvedību (Cameron & Quinn 2011; WHO 2022).

Denison un Mishra (1995) modelis izceļ četrus kultūras aspektus – iesaisti, konsekvenci, adaptāciju un misiju. Kultūrās ar augstu iesaisti un sociālo atbalstu darbiniekiem ir zemāks atkarību risks, savukārt pārmērīgi hierarhiskas vai vienpusēji uz rezultātiem orientētas kultūras veicina stresu un kompulsīvu uzvedību (Denison & Neal, 1999). Līdzīgas tendences raksturo arī Cameron un Quinn (2011) konkurējošo vērtību modelis, kur klanu tipa kultūras saistītas ar zemāku psihosociālo risku.

Psihodinamiskajā skatījumā toksiska organizācijas kultūra pastiprina trauksmi un var veicināt atkarību kā “pašārstēšanās” mehānismu (Khantzian 2015; Goodman 2019). Savukārt organizācijās ar attīstītu PSC veidojas uzticēšanās, atklāta komunikācija un agrīna problēmu risināšana (Dollard & Bakker 2010; Eurofound 2023; WHO 2022).

Starptautiskā literatūra identificē vairākus pierādījumus balstītus darbinieku atkarību profilakses virzienus. Tie ietver integrētas darba vietas veselības veicināšanas programmas (IWHP), kas apvieno izglītošanu, risku skrīningu un darba vides pielāgošanu (Noblet & LaMontagne 2006; WHO 2022), kā arī agrīnās intervences un darbinieku atbalsta programmas (EAP, SBIRT), kas samazina alkohola un medikamentu lietošanu un uzlabo darbinieku labbūtību (Attridge 2019; Thørrisen et al. 2022).

Būtiska nozīme ir arī PSC stiprināšanai, skaidrām organizācijas politikām un darba vides pielāgošanai, kas mazina stresu, nogurumu un traumu risku (Dollard & Bakker 2010; Eurofound 2023; EU-OSHA 2025). Efektīvu profilaksi papildina veselībai draudzīgu sociālo normu veidošana un regulārs darbinieku labbūtības monitorings (OECD 2023; EUDA 2023).

Starptautiskās organizācijas uzsver arī darba devēju atbildību veidot drošu un veselībai labvēlīgu darba vidi. WHO rekomendē skaidras bezalkohola un bezdūmu politikas un pieejamu atbalstu riska grupām (WHO 2023; WHO 2024), savukārt ILO iesaka atkarību jautājumus risināt ar rehabilitācijas un reintegrācijas pieeju, nevis tikai disciplināri (ILO 2015).

Pētījuma rezultāti

1. Atkarību izplatība darba vidē un organizācijas kultūra: Eiropas un Latvijas pieredze.

Naratīvā literatūras pārskata un sekundārās statistisko datu analīzes rezultāti liecina, ka vielu un uzvedības atkarību riski darba vidē ir saistīti ne tikai ar individuāliem faktoriem, bet arī ar organizācijas kultūru, vadības praksi un darba vides psihosociālajiem apstākļiem. Starptautisko, Eiropas un Latvijas datu salīdzinošā analīze ļāva identificēt būtiskākos ar alkohola lietošanu, smēķēšanu, darba atkarību un psihosociālajiem riskiem saistītos rādītājus, kā arī organizācijas kultūras faktorus, kuri var darboties kā riska vai aizsargfaktori. Analīzes rezultātu apkopojums sniegts 1. tabulā.

Vielu un uzvedības atkarību izplatība darba vidē Eiropā un Latvijā un to saistība ar organizācijas kultūras faktoriem

Rādītājs/indikators	Eiropas/starptautiskie dati	Latvijas dati	Organizācijas kultūras un darba vides saistība
Alkohola lietošana un ar to saistītais risks	Aptuveni 5–20 % Eiropas strādājošo ir nopietnas ar alkohola lietošanu saistītas problēmas (Borrelli et al. 2022).	Latvijā 2019. gadā alkohola patēriņš sasniedza 12,9 l tīra alkohola uz vienu iedzīvotāju vecumā ≥ 15 gadi, kas bija augstākais rādītājs OECD valstīs (OECD 2021).	Darba vides sociālās normas un darba stresori var ietekmēt alkohola lietošanu; darba stresori ir saistīti ar alkohola lietošanu un alkohola izraisītām problēmām (Frone 2016; Thørrisen et al. 2022).
Smēķēšana	Smēķēšana ir saistīta ar lielāku darba kavējumu un darbnespējas risku (Weng et al. 2013; Troelstra et al. 2020).	Latvijā smēķēšana saglabājas kā būtisks sabiedrības veselības riska faktors, īpaši vīriešu populācijā (SPKC 2023).	Darba vietas veselības veicināšana un organizācijas līmeņa intervences var palīdzēt mazināt ar darbinieku veselību saistītos riska faktorus (Noblet & LaMontagne 2006; Proper & van Oostrom 2019).
Darba atkarība (darbaholisms)	Sistemātiskajā pārskatā un metaanalīzē, ietverot 53 pētījumus, 71 625 dalībniekus no 23 valstīm, kopējā darbaholisma prevalence bija 15,2 %; atsevišķos pētījumos tā svārstījās no 1,5 % līdz 44,9 % (Andersen et al. 2023).	Salīdzināmi reprezentatīvi dati par darba atkarības izplatību Latvijas nodarbināto populācijā nav identificēti.	Darbaholisms ir saistīts ar nelabvēlīgiem veselības, darba un darba–ģimenes dzīves iznākumiem (Clark et al. 2016; Schaufeli et al. 2008).
Psihosociālie riski darbā	Psihosociālie darba vides riski, tostarp augsta darba intensitāte, stress un darba–privātās dzīves konflikts, ir nozīmīga Eiropas darba vides problēma (Eurofound 2023).	Latvijas kontekstā specifiski reprezentatīvi dati, kas psihosociālos darba vides riskus tieši sasaista ar atkarību izplatību nodarbināto vidū, ir ierobežoti.	Augsts psihosociālās drošības klimats (PSC) raksturo vadības prioritāti darbinieku psiholoģiskajai veselībai un ir saistīts ar labvēlīgāku darba vidi un psiholoģiskās veselības rādītājiem (Dollard & Bakker 2010).
Veselības veicināšana un atkarību profilakse darba vietā	Darba vietas veselības veicināšanas intervences var ietvert organizācijas līmeņa pārmaiņas, darba vides pielāgošanu un individuāli	Latvijas darba vietām specifiski reprezentatīvi dati par strukturētu atkarību profilakses	Integrēta pieeja, kas apvieno organizācijas līmeņa pārmaiņas, psihosociālo risku mazināšanu un

Rādītājs/indikators	Eiropas/starptautiskie dati	Latvijas dati	Organizācijas kultūras un darba vides saistība
	orientētus veselības veicināšanas pasākumus (Proper & van Oostrom 2019; WHO 2022).	programmu izplatību nav pietiekami, lai norādītu vienotu kvantitatīvu rādītāju.	darbinieku atbalstu, var sekmēt veselīgāku darba vidi un darbinieku labbūtību (Noblet & LaMontagne 2006; WHO 2022).

Avots: autoru veidots pēc EUDA 2023; OECD/WHO 2022; SPKC 2023; Eurofound 2023; Atroszko et al. 2023; OSH Wiki 2024; Eurofound 2023; Saravanan et al. 2025; WHO 2022; Dollard & Bakker 2010

2. Atkarību izplatība Latvijā un to saistība ar darba vidi

Sekundāro statistisko datu analīze liecina, ka Latvijā alkohola lietošana un smēķēšana joprojām ir būtiski sabiedrības veselības riska faktori, kas skar arī darbības vecuma iedzīvotājus un var ietekmēt darba vidi, darbinieku darbības un organizāciju produktivitāti. Pieejamie dati norāda, ka ikdienas smēķētāju īpatsvars Latvijā sasniedz aptuveni 27 %, pārsniedzot Eiropas Savienības vidējo rādītāju, savukārt vīriešu populācijā smēķēšanas izplatība ir vēl augstāka (SPKC 2023).

Arī alkohola patēriņa rādītāji Latvijā ir vieni no augstākajiem Eiropas Savienībā. Alkohola patēriņš sasniedz aptuveni 12,9 litrus absolūtā alkohola uz vienu iedzīvotāju gadā, savukārt aptuveni 22 % populācijas alkoholu lieto bīstamā līmenī (OECD/WHO 2022; SPKC 2023). Pētījumi liecina, ka pārmērīga alkohola lietošana ir saistīta ar paaugstinātu darba kavējumu, nelaimes gadījumu un samazinātas darba efektivitātes risku (Thørrisen et al. 2019; Eurofound 2023).

Smēķēšanas un alkohola lietošanas izplatība ir nozīmīga arī organizāciju vadības kontekstā. Smēķēšana ir saistīta ar lielāku slimības dienu un darba kavējumu skaitu (Weng et al. 2013; Troelstra et al. 2020), savukārt alkohola lietošana var negatīvi ietekmēt darba sniegumu, drošību un produktivitāti. Tādējādi atkarību izraisīto vielu lietošanas sekas nav attiecināmas tikai uz indivīda veselību, bet skar arī organizācijas darbības efektivitāti un darba vides kvalitāti.



3.attēls Darba vietas labbūtības stratēģijas

Avots: autoru veidots pēc Noblet & LaMontagne, 2006; Dollard & Bakker, 2010; ILO, 2015; Attridge, 2019; Eurofound, 2023; WHO, 2023;

Pētījumi liecina, ka visefektīvākās ir daudzkomponentu programmas, kurās strukturālas organizācijas līmeņa pārmaiņas tiek apvienotas ar izglītojošiem pasākumiem un individuālu atbalstu darbiniekiem. EU-OSHA (2024, 2025) apkopotie dati norāda, ka šādu

programmu ieviešana saistās ar alkohola un smēķēšanas lietošanas samazināšanos, kā arī ar darbinieku apmierinātības un lojalitātes uzlabojumiem; atsevišķos gadījumos ziņots par vidēju lietošanas samazinājumu 15–20 % robežās.

2.1. Darbnespēja, ekonomiskā ietekme un ieteikumi darba devējiem

Atkarības ir nozīmīgs darbnespējas un produktivitātes zuduma faktors. Eiropas Savienībā 2022. gadā reģistrēti ap 2,97 miljoni nenāvējošu un 3286 nāvējoši darba negadījumi, un psihoaktīvo vielu lietošana dažās nozarēs tiek minēta kā risku pastiprinošs faktors (EUDA, 2023; Eurostat, 2024). Pētījumi apliecina saistību starp alkohola lietošanu, darba kavējumiem, klātbūtnes slimību (presenteeism) un zemāku darba efektivitāti (Thørrisen et al. 2019).

Ekonomiski alkohola lietošanas izmaksas sasniedz ap 2,6 % no IKP, bet smēķēšanas radītās izmaksas – ap 1,8 %, ietverot gan veselības aprūpes izdevumus, gan produktivitātes zudumu (Goodchild et al. 2018; Manthey et al. 2021; OECD 2023). WHO/Europe (2024) norāda, ka alkohola lietošana palielina traumu un nelaimes gadījumu risku, kas atspoguļojas arī darba tirgus rādītājos.

Tādēļ atkarību profilakse darba vietā jāuztver kā stratēģisks ieguldījums organizāciju drošībā, efektivitātē un ilgtspējā, integrējot to darba aizsardzības un personālvadības politikās.



4.attēls Darba vietas vielu lietošanas profilakse

Avots: autoru veidots pēc Goodchild et al. 2018; Manthey et al. 2021; OECD 2023; WHO/Europe 2024.

Efektīvi darba devēju pasākumi atkarību mazināšanai ietver skaidru politiku par vielu lietošanu, kas balstīta prevencijā, rehabilitācijā un reintegrācijā (ILO 2015; WHO 2023), agrīnu riska atpazīšanu un konfidenciālu atbalstu (SBIRT, EAP) (Attridge 2019; Thørrisen et al. 2022), kā arī PSC stiprināšanu, nodrošinot atbalstošu vadību, reālistisku darba slodzi un darba–dzīves līdzsvaru (Dollard & Bakker 2010; EU-OSHA 2025). Nozīmīga ir arī organizācijas kultūras maiņa, veidojot iekļaujošu vidi un mazinot alkoholcentriskas sociālās normas (Eurofound 2023; Sussman et al. 2023; Ng et al. 2024), kā arī regulārs darbinieku veselības un darba drošības indikatoru monitorings (OECD 2023; EU-OSHA 2025).

Šādu pasākumu kombinācija veido integrētu profilakses sistēmu, kas saistīta ar zemāku atkarību izplatību, mazākiem produktivitātes zudumiem un augstāku darbinieku lojalitāti (Verra et al. 2019; WHO 2022).

Secinājumi

Pētījums piedāvā integrētu skatījumu uz atkarībām darba vidē, analizējot vielu un uzvedības atkarības organizācijas kultūras un psihosociālā drošības klimata (PSC) kontekstā. Latvijas pētniecībā šāda pieeja līdz šim ir izmantota ierobežoti, tādēļ pētījums paplašina izpratni par darba vides ietekmi uz darbinieku veselību un uzvedību.

Rezultāti liecina, ka atkarību riski darba vidē ir saistīti ar organizācijas kultūras raksturu. Toksiska, pārmērīgu prasību un zema sociālā atbalsta vide palielina psihoaktīvo vielu lietošanas un uzvedības atkarību risku, savukārt kultūra ar augstu PSC līmeni, atklātu komunikāciju un empātisku vadību darbojas kā aizsargfaktors.

Latvijas kontekstā smēķēšanas un alkohola lietošanas rādītāji pārsniedz ES vidējos rādītājus, radot būtisku ietekmi uz darbaspējām, produktivitāti un ekonomiku. Tas uzsver nepieciešamību integrēt atkarību profilaksi darba aizsardzības, personālvadības un organizācijas kultūras politikās.

Pētījums apliecina, ka visefektīvākā pieeja ir daudzkomponentu profilakses sistēma, kas ietver PSC stiprināšanu, agrīnu riska atpazīšanu un atbalsta programmas (SBIRT, EAP), darba vides uzlabošanu un veselībai labvēlīgu sociālo normu veidošanu. Turpmākai attīstībai Latvijā nepieciešama sistemātiska datu uzkrāšana par atkarību riskiem darba vidē un to saistību ar organizācijas kultūru.

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Addiction risks and their prevention in the workplace in the context of organizational culture

Summary

The article examines the relationship between organizational culture and the risk of substance-related and behavioral addictions in the workplace, with particular attention to the role of psychosocial working conditions in the development and prevention of addictive behaviors. The study is based on a narrative literature review and secondary analysis of statistical data, drawing on scientific publications and reports from international and Latvian institutions. The analysis focuses on alcohol and tobacco use, work addiction, and other behavioral addictions, as well as organizational and psychosocial factors associated with these risks. Particular attention is paid to organizational culture models and the concept of Psychosocial Safety Climate (PSC) as a framework for understanding how management practices, workplace norms, leadership, and employee support may influence addiction-related risks. The findings indicate that organizational environments characterized by high job demands, excessive performance pressure, low psychological safety, and insufficient managerial support may contribute to a higher risk of addictive behaviors. In contrast, a supportive and participative organizational culture that prioritizes employees' psychological health and well-being can serve as a protective factor. The article emphasizes an integrated workplace prevention approach combining clear organizational policies, early identification of risks, confidential employee support, psychosocial risk management, and systematic monitoring of the work environment. Strengthening organizational culture and psychosocial safety should therefore be considered an important component of workplace addiction prevention and employee well-being promotion.

Keywords: organizational culture, workplace addiction, psychosocial safety climate, alcohol use, behavioral addictions, prevention, employee well-being.

THE POSITIVE ROLE OF ARTIFICIAL INTELLIGENCE IN ENHANCING ORGANISATIONAL OPERATIONAL EFFICIENCY DURING DIGITAL TRANSFORMATION

Abstract. Digital transformation represents a fundamental shift in organizational operations, driven by the integration of advanced technologies such as artificial intelligence (AI). This paper explores the positive role of AI in enhancing operational efficiency during digital transformation, emphasizing its capacity to automate processes, optimize resource allocation, and enable data-driven decision-making. AI technologies, including machine learning, natural language processing, and robotic process automation, significantly reduce operational costs, minimize human error, and improve scalability across sectors such as manufacturing, healthcare, and finance. However, challenges related to data privacy, algorithmic bias, and implementation costs remain salient barriers to widespread adoption. The study concludes that a strategic approach – combining technological investment, workforce training, and ethical frameworks – is essential for leveraging AI to achieve sustainable operational excellence in the digital era.

Keywords: artificial intelligence, digital transformation, operational efficiency, process automation, machine learning, data-driven decision making.

Introduction

The contemporary business landscape is defined by the pervasive force of digital transformation (Brynjolfsson & McAfee 2017; Davenport & Ronanki 2018). It is not merely the adoption of new digital tools but a fundamental reimagining of business models, operational processes, and customer engagement strategies (Davenport & Ronanki 2018). At the heart of this paradigm shift lies the imperative to enhance operational efficiency – to do more with less, to accelerate processes, and to unlock new levels of productivity and value (Rajkumar & George 2024). In this context, Artificial Intelligence (AI) has emerged as the pivotal enabler, transforming from a futuristic concept into a core driver of competitive advantage (Kaplan & Haenlein 2019).

Operational efficiency, traditionally focused on streamlining linear processes, now demands a dynamic, intelligent, and predictive approach (Ransbotham et al. 2017). Legacy systems and manual interventions are increasingly incapable of coping with the volume, velocity, and variety of data in the modern economy (Brynjolfsson & McAfee 2017). AI, with its subset technologies like Machine Learning (ML), Natural Language Processing (NLP), and Robotic Process Automation (RPA), provides the capability to not only automate tasks but to learn from data, predict outcomes, and optimize complex systems in real time (Davenport 2023).

A 2023 report by McKinsey & Company indicates that companies that have scaled AI capabilities across their organizations report significantly higher cost reductions and revenue increases – averaging 10–20% in EBIT growth – compared to their peers who have not (McKinsey & Company 2023). This underscores the direct correlation between AI adoption and operational performance (Rajkumar & George 2024).

This paper aims to analyze and dissect the positive role of AI in augmenting operational efficiency throughout the digital transformation journey. To achieve this objective, the study is conducted based on a comprehensive literature review method. It will first establish a conceptual framework linking AI and operational excellence. Subsequently, it will delve into specific AI technologies and their practical applications across following sectors – manufacturing, healthcare, financial – illustrating tangible benefits such as cost reduction, error minimization, and enhanced scalability. Acknowledging that the path is not without obstacles, the paper will also address significant challenges including ethical concerns and implementation hurdles. Finally, it will propose a strategic blueprint for organisations to

successfully harness AI's potential, ensuring that the pursuit of efficiency is both sustainable and responsible. not without obstacles, the paper will also address significant challenges, including ethical concerns and implementation hurdles. Finally, it will propose a strategic blueprint for organizations to successfully harness AI's potential, ensuring that the pursuit of efficiency is both sustainable and responsible.

Theoretical Framework and AI as the Engine of Operational Efficiency

Operational efficiency can be defined as the ratio between the output generated by a business operation and the input resources required to execute it (Ransbotham et al. 2017). The core goal of operational management is to maximise productive output while minimising the consumption of input resources, including time, financial capital, and human labour (Davenport & Ronanki 2018). Digital transformation redefines this traditional efficiency equation by establishing data as a core production input and strategic organisational asset (Brynjolfsson & McAfee 2017; Davenport 2023). Building on this redefinition, AI functions as the central processing engine that converts raw data and operational inputs into enhanced performance outputs through three interrelated core capabilities, as illustrated in Figure 1.

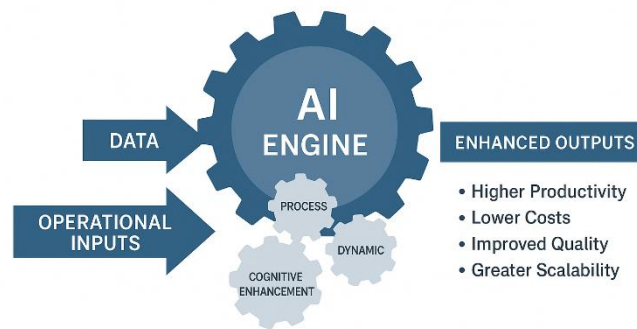


Figure 1. The AI-Driven Operational Efficiency Engine

Source: Author's construction based on theoretical frameworks presented in Davenport (2023) and Rajkumar & George (2024)

AI drives operational efficiency gains by processing data assets through three interlinked mechanisms: process automation, cognitive enhancement, and dynamic optimisation. Together, these mechanisms transform static operational systems into adaptive, self-improving ecosystems that outperform traditional rule-based structures.

Process automation represents the most direct and widely adopted application of AI in operational settings. Powered by technologies such as RPA and intelligent workflow systems, AI-driven automation executes repetitive, rule-based operational tasks with consistent speed and accuracy that exceed human capabilities. By automating routine administrative and transactional tasks, organisations can reallocate human capital to high-value activities that require creativity, critical thinking, and interpersonal judgement, thereby improving overall labour productivity and reducing operational bottlenecks (Oesterreich & Teuteberg 2024).

Beyond basic task automation, AI delivers cognitive enhancement capabilities that extend beyond the limits of human information processing capacity. Machine learning algorithms can analyse vast, heterogeneous datasets to identify hidden patterns, forecast operational failures, and generate evidence-based action recommendations that would be

infeasible for human teams to produce within practical timeframes. This cognitive support shifts operational management from a reactive, problem-solving posture to a proactive, predictive approach, allowing organisations to address risks and opportunities before they fully materialise (Davenport 2023; Rajkumar & George 2024).

The third mechanism, dynamic optimisation, leverages the continuous learning capacity of AI systems to adapt operational processes in real time. Unlike static pre-programmed systems, AI-enabled operational frameworks can continuously learn from new data, adjust parameters, and optimise complex interconnected processes such as supply chain networks, energy distribution systems, and customer service routing. This adaptive capacity ensures that operations remain efficient even amid fluctuating market conditions, demand volatility, and supply chain disruptions, enhancing organisational resilience (Wang et al. 2023).

This conceptual framework positions AI not as a discrete technological tool, but as a foundational component of a new operational paradigm. In this paradigm, operational systems are capable of self-optimisation, strategic decisions are grounded in empirical data insights, and organisational resources are allocated with granular precision. This shift represents a fundamental evolution from the linear, efficiency-focused models of the industrial era to the intelligent, adaptive systems required for digital-era competitiveness (Brynjolfsson & McAfee 2017; Kaplan & Haenlein 2019).

Several core AI technologies underpin the efficiency gains observed in digital transformation initiatives, each addressing distinct operational challenges and delivering specific performance improvements. The following sections examine the three most impactful technologies and their respective effects on operational performance.

Machine learning (ML) is a subset of AI that enables systems to learn patterns from historical data and generate predictions or decisions without explicit programming for every possible scenario. In operational contexts, this predictive capability represents a revolutionary advance over traditional retrospective reporting and rule-based management systems (Davenport 2023).

One of the most impactful operational applications of ML is predictive maintenance in manufacturing and asset-intensive industries. Predictive maintenance systems analyse real-time sensor data from production equipment to forecast component failures before they occur, enabling maintenance activities to be scheduled only when condition-based indicators justify intervention. This approach eliminates costly unplanned downtime, extends physical asset lifespan, and reduces excess spare parts inventory by shifting maintenance from a rigid time-based schedule to an efficient condition-based model. As a result, organisations see substantial improvements in Overall Equipment Effectiveness (OEE), a key metric for manufacturing operational performance (Wang et al. 2023).

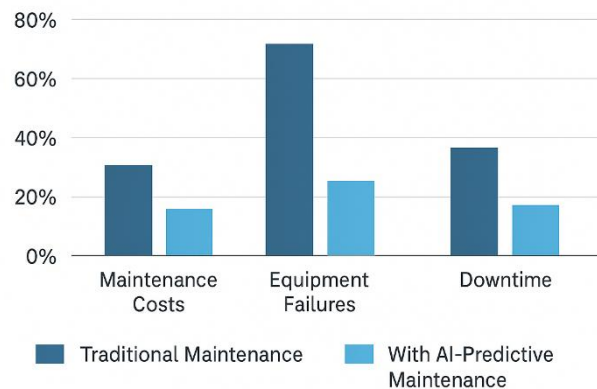


Figure 2. Benefits of Predictive Maintenance

Source: Author’s construction based on empirical data from Deloitte Insights (2020) and Wang et al. (2023)

Empirical research supports these performance gains: a Deloitte analysis found that organisations implementing predictive maintenance programmes achieved a 25–30% reduction in maintenance costs, a 70–75% decrease in unexpected equipment failures, and a 35–45% reduction in unplanned downtime (Deloitte Insights 2020). These findings are corroborated by more recent industry data, which confirms sustained efficiency improvements as ML predictive models mature (Wang et al. 2023).

Robotic Process Automation (RPA) is a technology that uses software agents, or “robots”, to emulate routine human interactions with digital systems, such as data entry, form processing, and transaction execution. When integrated with AI capabilities such as ML and NLP, RPA evolves into intelligent automation, which can process semi-structured data sources and make context-aware simple decisions without human intervention (Oesterreich & Teuteberg 2024).

In the finance sector, RPA and intelligent automation are widely deployed to streamline back-office functions including invoice processing, account reconciliation, and regulatory compliance reporting. Intelligent automation bots can extract relevant data from unstructured sources such as emails and scanned invoices, input the data into enterprise resource planning (ERP) systems, and automatically flag discrepancies for further review. Industry evidence indicates that RPA implementations reduce end-to-end process completion time by up to 80%, virtually eliminate human error in data entry tasks, and enable finance teams to reallocate their time from transactional processing to high-value strategic analysis and financial forecasting (Oesterreich & Teuteberg 2024).

Natural Language Processing (NLP) is an AI technology that enables machines to understand, interpret, and generate human language in both written and spoken forms. This capability is particularly transformative for knowledge-intensive work and customer-facing operational functions, where communication and unstructured text data are central to daily activities (IBM 2022).

In customer service operations, AI-powered chatbots and virtual assistants built on NLP technology can handle high volumes of routine customer inquiries, deliver instant responses 24 hours a day, seven days a week, and escalate complex issues to human agents with full contextual history. This automation significantly reduces customer wait times and lowers the operational cost per service query, while simultaneously improving customer satisfaction scores by providing faster, more consistent support. Internally, NLP systems can analyse large volumes of unstructured documents such as legal contracts, research reports,

and policy documents to extract key information and insights in seconds, dramatically reducing the time required for document review and knowledge management tasks (IBM 2022; Davenport 2023).

Sector-Specific Applications and Benefits

The operational efficiency benefits of AI are not limited to a single industry, but manifest across diverse sectors in application-specific ways. The following sections examine AI use cases in manufacturing, healthcare, and financial services, illustrating how sector-specific operational challenges are addressed through targeted AI implementations.

The manufacturing sector has been at the forefront of AI-driven operational transformation, with the “smart factory” concept serving as a leading example of integrated AI deployment. Beyond predictive maintenance for equipment, AI technologies optimise the entire end-to-end production chain, from raw material sourcing to finished product distribution (Wang et al. 2023).

For example, a global automotive manufacturer has deployed computer vision, a specialised AI technology, to automate assembly line quality control. High-resolution cameras positioned along the production line instantly detect microscopic product defects that are undetectable to the human eye, enabling real-time corrections and preventing defective products from progressing further in the production process. This implementation delivers multiple operational benefits: it achieves near-perfect product quality consistency, reduces waste associated with rework and product recalls, and contributes to a more resilient and responsive supply chain by minimising production disruptions. Collectively, these improvements drive significant gains in overall manufacturing efficiency and product competitiveness (Rajkumar & George 2024).

The healthcare sector is experiencing a revolution in operational performance driven by AI adoption, extending beyond well-known clinical diagnostic applications to transform administrative and operational management processes.

Many hospital systems now deploy ML algorithms to optimise patient flow management and staff scheduling. These algorithms analyse historical admission data, seasonal trends, and surgery schedules to predict patient admission rates and average procedure durations. Based on these predictions, the system dynamically optimises hospital bed allocation, reduces patient wait times for admission and treatment, and ensures that medical and nursing staff are deployed to areas of highest demand. These AI-driven operational improvements deliver tangible benefits for both patients and healthcare providers: reduced wait times contribute to improved patient outcomes and satisfaction, optimised bed allocation increases hospital capacity utilisation rates, and more equitable staff scheduling enhances workforce productivity and morale. In an industry facing persistent resource constraints, these efficiency gains directly support improved care delivery capacity (Rajkumar & George 2024).

The financial services sector, whose core operations are built on data processing and transactional workflows, is particularly well suited to AI-driven efficiency improvements. The high volume of standardised transactions and strict regulatory requirements make financial operations a prime target for AI automation and optimisation.

A prominent use case is AI-powered fraud detection in retail and commercial banking. ML models analyse real-time transaction patterns across millions of customer accounts to identify anomalous behaviour indicative of fraud, enabling instant blocking of suspicious transactions. Unlike traditional rule-based fraud systems that generate high volumes of false positives, ML models continuously learn from new fraud patterns, improving their accuracy over time and outperforming manual review processes by a

significant margin. The operational benefits of this technology are substantial: it protects customer assets from unauthorised transactions, reduces direct financial losses from fraud, and automates a significant portion of regulatory compliance monitoring. Industry estimates indicate that effective AI fraud detection systems save financial institutions millions of dollars annually in potential regulatory fines and manual oversight costs (Davenport 2023).

Research Limitations

Despite the significant transformative potential of AI for operational efficiency, integrating AI into established organisational frameworks presents substantial challenges and limitations. These barriers span technological, ethical, financial, and workforce domains, and must be addressed to achieve sustainable AI adoption.

Data privacy and security represent a primary challenge for AI-enabled operations. AI systems require large volumes of high-quality data to train and operate effectively, which raises significant concerns regarding the privacy of customer and employee personal information. Organisations must navigate complex regulatory frameworks governing data protection, such as the European Union's General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA), which impose strict requirements for data collection, storage, and usage. Balancing the data needs of AI systems with compliance obligations and individual privacy rights remains a persistent operational and ethical challenge (Lee & Park 2025).

Algorithmic bias presents another critical barrier to responsible AI adoption. AI model performance is fundamentally constrained by the quality and representativeness of the training data, and historical operational data often contains inherent societal and organisational biases. When trained on biased data, AI systems can perpetuate or even amplify existing discriminatory practices in areas such as hiring, loan approvals, and patient care allocation. These biased outcomes create significant ethical risks, reputational damage, and potential legal liability for adopting organisations (Lee & Park 2025).

The high costs and technical complexity associated with enterprise AI implementation pose significant financial and operational barriers. Deploying production-grade AI systems requires substantial investment in technology infrastructure, data engineering capabilities, and scarce AI talent. Additionally, integrating AI solutions with legacy operational systems and existing IT architectures can be technically complex and disruptive to ongoing business operations. For small and medium-sized enterprises in particular, these upfront costs and integration challenges can be prohibitive, limiting widespread AI adoption across the broader economy (Rajkumar & George 2024).

Workforce-related challenges further complicate AI adoption. The automation of routine operational tasks creates widespread concerns about job displacement among employees, which can lead to resistance to AI implementation initiatives. Simultaneously, there is a global shortage of skilled professionals with the expertise to develop, deploy, manage, and interpret AI systems, creating a critical skills gap for organisations seeking to build in-house AI capabilities. Addressing these workforce challenges requires proactive organisational change management and targeted upskilling programmes (Davenport 2023; Lee & Park 2025).

Conclusions

Artificial intelligence is undeniably a cornerstone of modern digital transformation, acting as a powerful catalyst for achieving unprecedented levels of operational efficiency across industries. Its multifaceted capabilities – including the automation of complex

operational processes, real-time optimisation of resource allocation, and empowerment of evidence-based data-driven decision-making – are fundamentally reshaping operational models in sectors ranging from manufacturing to healthcare and financial services. The tangible benefits of AI adoption, from drastic cost reduction and minimised human error to enhanced operational scalability and organisational resilience, are too significant for organisations to overlook.

Nevertheless, the journey toward AI-enabled operational excellence is not solely a technological undertaking. The path to sustainable AI integration is marked by substantial challenges, including ethical concerns surrounding algorithmic bias and data privacy, significant upfront financial investments, and the need for comprehensive organisational change management. Success in this domain therefore depends on a balanced and strategic approach that extends beyond technology procurement alone.

Organisations must move beyond viewing AI as a discrete plug-and-play solution, and instead embrace it as an integral component of broader organisational transformation. This holistic approach should combine targeted technological investment, sustained commitment to workforce development and upskilling, and robust ethical governance frameworks. By adopting such a strategy, organisations can harness the full transformative power of AI to not only streamline their daily operations but also build a durable foundation for continuous innovation and long-term competitive advantage in the digital era.

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Mākslīgā intelekta pozitīvā loma organizācijas darbības efektivitātes uzlabošanā digitālās transformācijas laikā

Kopsavilkums

Digitālā transformācija ir būtiska izmaiņa organizāciju darbībā, ko stimulē tādu augsttehnoloģiju integrācija kā mākslīgā intelekta (MI). Šajā rakstā tiek pētīta MI galvenā loma organizāciju darbības efektivitātes uzlabošanā digitālās transformācijas laikā, uzsverot tā spēju automatizēt procesus, optimizēt resursu sadali un nodrošināt lēmumu pieņemšanu, pamatojoties uz datiem. MI tehnoloģijas, tostarp mašīnmācīšanās, dabiskās valodas apstrāde un robotizētu procesu automatizācija, ievērojami samazina darbības izmaksas, samazina cilvēku kļūdas un uzlabā mērogojamību tādās nozarēs kā rūpniecība, veselības aprūpe un finansi. Tomēr datiem saistītie izaicinājumi, tostarp datu privātība, algoritmu nobīdīšana un ieviešanas izmaksas, joprojām ir būtiskas šķēršļi plašai izmantošanai. Pētījums secina, ka stratēģiska pieeja, kas apvieno tehnoloģiskās investīcijas, darbinieku apmācības un ētiskos pamatnostādnes, ir būtiska, lai izmantotu MI potenciālu un sasniegtu ilgtspējīgu darbības izcilību digitālajā laikā.

Atslēgvārdi: mākslīgais intelekts, digitālā transformācija, darbības efektivitāte, procesu automatizācija, mašīnmācīšanās, lēmumu pieņemšana, pamatojoties uz datiem.

FORMULATING AND MANAGING ORGANIZATIONAL GOALS

Abstract. The paper examines how long-horizon priorities remain workable under turbulence when interpretation is managed as a cadence of openness, framing, and emotional containment rather than a one-off announcement. Evidence is drawn from public materials of three Latvian manufacturers: AS (joint-stock company) “Latvijas Finieris”, MADARA Cosmetics, and Valmiera Glass Group. The analysis treats the European Sustainability Reporting Standards (ESRS) and the Global Reporting Initiative standards (GRI) as comparable frames for topics, indicators, and governance. A structured document review is paired with the mapping of meaning carriers to this cadence. Three diagnostics are applied: plain-language framing of priorities, explicit links between indicators and the causal claims they test, and predictable update cycles with visible change logs. Findings show that coherence grows when boards sponsor a simple frame, indicators test the core rationale, and updates follow a steady rhythm that preserves comparability across periods. Coherence weakens when transparency appears without context, when framing outruns emotional acceptance, or when irregular communication erodes comparability. AS “Latvijas Finieris”: convert ESRS topic anchors into short change logs with near-term milestones and named owners so progress is auditable between annual cycles. MADARA Cosmetics: strengthen Global Reporting Initiative’s (GRI) mapping with a brief “why now” per topic, time-bounded milestones, and a tighter link from supplier controls to product-level quality evidence. Valmiera Glass Group: translate intent on energy efficiency and waste sorting into quantified targets with baselines and yearly checkpoints, and consolidate results in a single update. The practical contribution is a time-sensitive cadence model with diagnostics that help convert strategy into reproducible practice under volatility. The theoretical contribution specifies how the sequencing of interpretive work conditions the durability of performance effects in turbulent environments.

Keywords: interpretive cadence, European Sustainability Reporting Standards (ESRS), Global Reporting Initiative (GRI), boundary objects, plain-language framing, change logs, predictable update cycles, organizational coherence.

Introduction

Organizations facing turbulence must develop and manage goals in a way that provides a shared direction for action despite uncertainty, time pressure, and ambiguity. In such conditions, traditional administrative controls become less effective, and the work of alignment shifts toward collective sensemaking, where individuals collaboratively build a usable understanding of current priorities and how to proceed (Weick 1993; Weick 1995). In this study, goals are viewed not as static preferences but as socially constructed and rendered functional through framing, emotional labor, and material carriers that make meaning visible and reproducible across organizational levels (Star, Griesemer 1989).

This perspective establishes the creation of organizational goals as an interpretive task. Framing involves selecting and emphasizing certain information to diagnose problems, determine causes, and suggest actions; it condenses complex causality into a portable schema that can be translated into operations (Entman 1993; Snow et al. 1986). When leaders pair effective framing with open communication and emotional stability, employees more quickly agree on priorities, and coordination costs decrease because the underlying logic is consistently applied in local practices (Maitlis, Christianson 2014; Maitlis, Sonenshein 2010). Research on internal crisis communication explains this effectiveness: transparent, authentic, empathetic, forward-looking communication reinforces trust and readiness for coordinated change, whereas static, purely informational methods perform worse in rapidly changing environments (Coombs 2007; Men et al. 2024).

As an empirical and regulatory backdrop, the analysis uses the European Sustainability Reporting Standards (ESRS) and the Global Reporting Initiative standards (GRI) as comparable reference frames for topics, indicators, and governance, and it reads materials from three Latvian manufacturers – AS (joint-stock company) “Latvijas Finieris”,

MADARA Cosmetics, and Valmiera Glass Group (European Commission 2023; Global Reporting Initiative 2021).

This study adopts a managerial viewpoint that connects goal development with everyday tools that convey meaning. Short explanatory notes for decisions, consistent updates with clear change logs, and priority check cards function as boundary objects that stabilize frames during operational shifts; these carriers do more than report facts, they embody the intended causal rationale and success criteria. Under high volatility, such carriers help maintain coherence between goals, outcomes, and evaluation, keeping measures of success aligned with stated priorities rather than defaulting to what is easiest to quantify. This temporal perspective clarifies why a practice may succeed at one point and fail at another: effectiveness depends on the timing and sequence of interpretive moves, and breakdowns often appear as transparency without context, framing without prior emotional validation, or irregular contact that fragments the shared perspective.

The key contribution is a unified, time-sensitive model for formulating and managing organizational goals under uncertainty. It operationalizes an interpretive cadence – openness, framing, and emotional containment – by linking it to observable diagnostics and carriers, specifying how the designed rhythm of interpretation keeps targets practical as situations evolve (Gioia, Chittipeddi 1991; Weick 1995; Ducheck 2020).

Literature Review

Research on crises in organizations has shifted from control and continuity to an interpretive view, where aligned goals emerge through continuous sensemaking under uncertainty (Weick 1993; Weick 1995). Contemporary reviews reinforce this transition, emphasizing multi-level dynamics and distributed processes that constantly reshape the practical meaning of organizational goals (Maitlis, Christianson 2014).

Within this research stream, sensegiving examines how leaders influence followers' interpretations through deliberate communicative actions, transforming abstract objectives into practical guidance (Gioia, Chittipeddi 1991; Weick et al. 2005). Language and discourse are central to this process, converting strategy into operational cues via the use of metaphors, categories, and narratives .

Framing provides the cognitive mechanism for this translation by selectively highlighting information to diagnose issues, attribute causes, and prescribe action, thus generating portable schemata essential for coordination (Entman 1993; Snow et al. 1986).

Crisis-communication research complements this view by focusing on message design and timing. Situational Crisis Communication Theory links attributions of responsibility, message strategies, and reputational outcomes, underscoring the importance of consistency and timeliness (Coombs 2007). Studies on internal organizational change further indicate that leader transparency mitigates threat perception and increases receptivity to change, particularly when combined with authenticity, empathy, and an optimistic outlook (Men et al. 2024).

Emotions should be viewed not as interference, but as a coordination resource when they are acknowledged and managed (contained). The literature on emotional capability demonstrates how empathetic leadership and cohesive narratives stabilize attention and prevent interpretive breakdown during critical periods (Huy 1999; Maitlis, Sonenshein 2010).

A temporal perspective clarifies when specific actions are effective. Sensemaking follows a narrative trajectory across different phases, meaning that effectiveness depends on sequencing containment, framing, and openness to align with evolving conditions (Weick

1995). In distributed settings, this challenge intensifies, demanding mechanisms that ensure interpretations remain compatible across different locations and organizations.

Material carriers play a key role in maintaining this compatibility. Boundary objects – such as explanatory notes, consolidated updates, and change logs – function as objectified frames that make the active logic visible and verifiable across hierarchical levels (Star, Griesemer 1989; Weick et al. 2005).

Two integrative gaps inform the author's model. First, few studies combine communicative openness, cognitive framing, and emotional containment into a single framework that explains their dynamic, real-time interaction (Men et al. 2024). Second, alignment frequently erodes because the interconnected set of goals, outcomes, and assessment is not treated as a unified process that requires continuous synchronization during a crisis (Duchek 2020). The study addresses these gaps by defining the cadence that links these mechanisms to sustain a collective understanding of goals under organizational turbulence.

Methods

Research design and lens. The author uses an interpretivist, process-oriented design to trace how aligned goals are formed and maintained via openness, framing, and emotional containment under uncertainty, drawing on sensemaking and sensegiving with attention to language and material carriers that make frames portable across levels (Weick 1995; Gioia and Chittipeddi 1991; Weick et al. 2005; Star and Griesemer 1989).

Empirical setting and corpus. The study relies on public strategy and sustainability documents from three large Latvian companies operating under contemporary EU reporting practice. Materials include annual or management reports, sustainability policies, and ESG reports mapped to ESRS or GRI.

Unit of analysis. The unit is the goal episode, a bounded segment where a priority is stated or adjusted with causal rationale and success criteria, located by dated headers, target tables, governance statements, or change-log sections (Weick 1995).

Mechanisms and operationalisation. The author operationalises three mechanism families. Communicative openness covers what is known or unknown, declared update cadence, and visibility of decision rationales. Cognitive framing covers simple why–what–how schemata linking long-horizon aims to operational markers. Emotional containment covers acknowledgement and normalisation of concerns that keep frames receivable in practice, identified by narrative cues and tone in governance messages (Maitlis and Sonenshein 2010; Men et al. 2024).

Indicators and proxies. Given the public nature of sources, the author uses document-level proxies comparable across firms and years. For framing, the author codes explicit links from strategic aims to KPIs and milestones and the cross-references tying targets to assessment sections (Weick et al. 2005). For openness, the author codes declared reporting cycles, unified update sections, and explanations of target changes. For containment, author code concise empathetic or stabilising statements in chair or management letters that legitimise re-prioritisation (Maitlis and Christianson 2014).

Sampling and period. The author analyses the most recent documents available for each company within 2021–2024 that specify priorities, metrics, and governance. Selection ensures like-for-like reading under EU disclosure rules.

Coding and comparison. A two-cycle protocol is used. Structural coding marks goal statements, causal rationales, indicators, timelines, governance roles, and cadence. Pattern coding groups segments into the three mechanism families and notes their sequencing. Author then construct document timelines within each firm and compare across firms on

three axes: clarity of why–what–how links, cadence and transparency of updates, and tightness of ties between goals, outcomes, and assessment.

Quality and limitations. Triangulation combines narrative sections with indicator tables and governance statements to check internal coherence. Documents are treated as boundary objects that both describe and materialise frames, which fits the genres of strategy and sustainability reporting (Star and Griesemer 1989; Weick et al. 2005). Claims are limited to what the texts warrant, and generalisation is analytic rather than statistical.

Results

The corpus comprises three Latvian firms that articulate multi-year priorities in public documents aligned with contemporary EU reporting practice. The materials include a Sustainability Declaration for AS “Latvijas Finieris,” a Sustainability Policy for Valmiera Glass Group together with the 2021 sustainability report of AS Valmieras Stikla Šķiedra, and the 2021 ESG report of MADARA Cosmetics. Read as an integrated set, these documents allow the anchor-indicator-cadence chain to be traced: a priority is first anchored in a concrete text, then tested by indicators that match its causal claim, and finally maintained through a predictable update rhythm with visible ownership and verifiable artefacts. The corpus shows convergence with the prevailing topic architecture (see ESRS/GRI) that translates high-level topics into assessable markers while preserving comparability across reporting cycles (AS “Latvijas Finieris” 2024; Valmiera Glass Group 2024; Valmieras Stikla Šķiedra 2021; MADARA Cosmetics 2021).

Table 1 summarises, for each firm, the anchor-indicator-cadence chain. Columns list the stated priority, the exact document anchor, the indicator set that tests the claim, the update cadence and traceability, the accountable owner, the verification artefacts used as proof, and the latest status note.

Table 1

**Anchor-indicator-cadence chain in the Latvian companies’ reports
(see ESRS/GRI)**

Company	Priority (as written)	Document anchor	Indicator(s) tied to the claim	Update cadence & traceability	Accountable owner	Verification artefacts	Latest change/status note
AS “Latvijas Finieris”	Safety culture and near-miss learning	Sustainability Declaration 2024; ESRS topic structure; governance roles (AS “Latvijas Finieris” 2024)	Near-miss reports; training completion linked to procedural tightening	Annual declaration plus interim topic updates; visible change notes where topics are refined	Board oversight and named managerial roles (as stated)	Training records; procedure updates; incident-learning notes	Procedures tightened following learning cycles
MADARA	Climate and energy; product	ESG Report 2021;	Energy intensity and	Annual audited reporting;	Sustainability committee	Batch records; certificate	Annual ESG disclosure

Cosmetics	quality and safety	audited disclosures; topic sections (MADARA Cosmetics 2021)	emissions; product release tests; supplier audit results	stable identifiers across portfolio changes	oversight and QA roles (as stated)	audit excerpts	published for the period; identifiers stable across portfolio changes
Valmiera Glass Group / AS Valmieras Stikla Šķiedra	Waste minimisation; energy use; resource efficiency	Sustainability Policy 2024; Sustainability Report 2021 (Valmiera Glass Group 2024; Valmieras Stikla Šķiedra 2021)	Waste rate; energy use; resource-efficiency targets	Annual reporting with medium-term objectives and checkpoints	Oversight roles and operational responsibility (as stated)	Metering data; internal audit notes; policy updates	Medium-term objectives defined with owners and checkpoints

Source: compiled by the author based on companies' reports.

Note: priorities are transcribed as written; "document anchor" names the precise source for verification; indicators test the stated causal claim; cadence shows the refresh rhythm and where versions or change notes are visible; owners and artefacts indicate responsibility and proof. Topic mapping follows the regulatory frames (see ESRS/GRI).

The table makes three empirical features visible as defined above, and specifies how they are instantiated in the corpus: ownership is made traceable through named roles and board oversight, indicators are selected to test the stated causal logic rather than generic outputs, and the update cadence maintains period-to-period comparability even when portfolios or sites change. Even where explicit version control or full change logs are not published, topic-by-topic refresh and governance statements keep the frame legible across the year, and reconciliation at year-end preserves continuity with the prior cycle (AS "Latvijas Finieris" 2024; MADARA Cosmetics 2021; Valmiera Glass Group 2024; Valmieras Stikla Šķiedra 2021; see ESRS/GRI).

Within this pattern, AS "Latvijas Finieris" shows the clearest connection from topic anchors to routine work. The declaration aligns topic boundaries with the regulatory frames, specifies board-level oversight and named managerial roles, and uses periodically updated sections to keep expectations stable across sites. By linking safety culture and incident learning to procedural controls, the document clarifies what constitutes satisfactory closure and how evidence is produced in practice. Near-miss reporting and training completion are read not as ends in themselves but as inputs to procedure tightening with clear acceptance criteria, which reduces ambiguity for operational teams during implementation and keeps the audit trail compact and checkable between annual declarations (AS "Latvijas Finieris" 2024; see ESRS/GRI).

MADARA Cosmetics sustains alignment through audited disclosures that stabilise identifiers across portfolio adjustments. Climate and energy topics are translated into energy-intensity and emissions indicators, while product quality and safety are tied to batch-level artefacts such as release tests, certificates, and supplier audit results. This pairing makes

claims verifiable at the product level without additional interpretation, supports continuity when offerings or supplier mixes change, and limits drift by pinning assessments to artefacts that persist across reporting cycles. The audited character of the disclosures functions as a consistency device that narrows the range of acceptable measurement choices and keeps indicator definitions from sliding toward convenience metrics (MADARA Cosmetics 2021; see ESRS/GRI).

For Valmiera Glass Group / AS Valmieras Stikla Šķiedra, policy intent on waste minimisation, energy use, and resource efficiency is operationalised through medium-term objectives with owners and checkpoints. Metering data and internal audit notes provide proofs of movement against the baseline, while annual refresh consolidates revisions so that directional narratives remain stable even when intermediate targets are recalibrated. Where the policy emphasises stakeholder dialogue and oversight roles, the reporting path to target attainment is made visible by listing responsibilities and next actions, joining executive intent to shop-floor and procurement routines and clarifying which functions must adapt for measurable progress (Valmiera Glass Group 2024; Valmieras Stikla Šķiedra 2021).

Cross-sectionally, the strongest alignment appears where the diagnostics cohere in practice: priorities are legible to those who must act, indicators are explicitly tied to the causal claim they are meant to test, and updates follow a predictable rhythm with either visible edit history or clearly signposted topic refresh. When any link weakens, two failure modes recur. Either measurement defaults to what is easiest to count, decoupling indicators from the stated aim, or cadence becomes irregular, making it costly to determine which figure reflects the current frame of work. Using the shared regulatory frames helps mitigate both risks by compressing causal logic into auditable markers and a common vocabulary that persists across cycles, which in turn keeps comparisons feasible when portfolios or organisational boundaries shift (see ESRS/GRI).

Taken together, these results indicate that goal alignment in the analysed Latvian materials is not a by-product of resource stock but an outcome of design choices in how goals are anchored, tested, and refreshed. Where the anchor-indicator-cadence chain is visible, ownership remains stable across cycles and progress is auditable rather than asserted; where the chain is partial, additional interpretation is required at each refresh, raising coordination costs and the likelihood of drift.

Discussion, Conclusions and Recommendations

Discussion. Aligned goals do not persist by decree; they endure through a working rhythm that coordinates openness, disciplined framing, and emotional containment so that priorities remain actionable as conditions change (Weick 1995; Gioia, Chittipeddi 1991). Order matters: acknowledging uncertainty prepares credible framing, framing connects strategy to milestones, and containment practices help the frame embed in daily work (Huy 1999; Weick 1995). When this sequence is broken – when transparency lacks context or frames are not backed by verifiable artefacts – the shared logic fragments and coordination costs rise (Men et al. 2024; Weick 1995).

Material carriers make this rhythm visible and auditable across levels. In the analysed materials, ESRS-structured updates, concise change logs, and policy anchors function as boundary objects that stabilise the intended causal story and keep it portable across cycles (Star, Griesemer 1989; Weick et al. 2005; AS "Latvijas Finieris" 2024; Valmiera Glass Group 2024; Valmieras Stikla Šķiedra 2021; MADARA Cosmetics 2021). Their role is to hold a shared schema visible and revisable without restarting collective understanding.

Alignment deteriorates when transparency is inconsistent, when indicators are chosen for ease of counting rather than fit with the current frame, or when updates lack a predictable

cadence (Duchek 2020). To avoid drift, indicators should inherit meaning from the active frame, and updates should follow a light, regular rhythm with minimal overhead (Coombs 2007; Men et al. 2024).

Three managerial implications follow. First, choreograph the sequence: acknowledge uncertainty, translate priorities into milestones, then support integration into routines (Weick 1995; Huy 1999). Second, instrument the frame with visible, reusable carriers – ESRS-structured updates, short decision notes, and change logs – so that meaning remains auditable as it moves through the system (Star, Griesemer 1989; Weick et al. 2005). Third, keep the triad of goals, outcomes, and assessment synchronised by aligning indicators with the current frame in each cycle; the Latvian corpus shows this is feasible within EU reporting regimes (Coombs 2007; Men et al. 2024).

Conclusions. Under turbulence, the workability of long-horizon priorities depends less on resource stock and more on timing, clarity, and disciplined reuse of meaning carriers that keep a living frame aligned with measurement. Coherence increases when three diagnostics converge: priorities are written in plain, actionable language; indicators are explicitly tied to the causal claims they are meant to test; and updates follow a predictable rhythm with visible edit history so that progress is auditable rather than asserted. The study offers a pragmatic lens for managing goals under uncertainty: treat goals as living frames sustained by routines of articulation, testing, and revision, not as static statements. Limitations include the sectoral focus and document-based inference; future work should integrate behavioural and outcome data, calibrate thresholds for milestone gating, and test portability of the cadence across contexts with different regulatory and operational pressures.

Recommendations. AS "Latvijas Finieris". Convert each ESRS thematic anchor into a concise change log with 30–90-day milestones, named owners, and status notes; publish as a rolling register between annual cycles. Add a simple RACI tag per item, acceptance criteria for closure, and a short risk note linked to the central risk register. Keep a monthly update cadence with quarterly snapshots for version control, and show three counters on a one-page dashboard: share of milestones on time, overdue items, and escalations closed since the last snapshot. Require evidence links for every closed action (policy updates, training records, audit excerpts), and prevent annual claims from closing without attached proof.

MADARA Cosmetics. Add a brief why-now rationale to each topic tied to materiality and current risk (for example regulatory change, customer audit, or incident learning). Convert every topic into time-bounded milestones with entry and exit criteria, name owners, and specify verification artefacts such as batch records, certificates, or stability tests. Tighten the chain from supplier controls to product-level quality by mapping lot traceability end to end, integrating supplier scorecards into the product release checklist, and using risk-based audit frequency for high-impact suppliers. Capture nonconformities with a clear CAPA timer and auto-escalation for repeats. Keep evidence discoverable at product level, for example via a digital product passport or dossier link.

Valmiera Glass Group. Translate policy intent into quantified targets with baselines and yearly checkpoints (for example energy intensity, scrap rate, injury rate, or recycled input share). Present all targets on a single update page listing owner, current value vs baseline, explanation of variance, and the next corrective step, using a simple traffic-light to keep direction and pace visible. Pull figures from production and finance systems on a monthly cycle, run an internal check once per quarter, and store all revisions to preserve an audit trail. Define when a target is done, keep short change-control notes for any reset, and limit narrative per target to three lines. Use this consolidated page as the source of truth for board updates and external communication to prevent channel drift.

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Organizācijas mērķu formulēšana un pārvaldība

Kopsavilkums

Raksts analizē, kā ilgtermiņa prioritātes saglabā īstenojamību turbulences apstākļos, ja interpretācija tiek vadīta kā atvērtības, ierāmēšanas un emocionālās līdzsvarošanas kadence, nevis kā vienreizējs paziņojums. Pierādījumu bāze balstās uz trīs Latvijas ražotāju publiskajiem materiāliem: AS “Latvijas Finieris”, MADARA Cosmetics un Valmiera Glass Group. Analizē Eiropas ilgtspējas pārskatīšanas standarti (EIPS) un Global Reporting Initiative standarti (GRI) tiek lietoti kā savstarpēji salīdzināmas ietvarstruktūras tēmām, indikatoriem un pārvaldībai. Strukturēts dokumentu pārskats ir savienots ar nozīmes nesēju kartējumu pret šo kadenci. Tiek piemērotas trīs diagnostikas: prioritāšu formulēšana skaidrā valodā, nepārprotamas saites starp indikatoriem un cēloņsakarības apgalvojumiem, kurus tie pārbauda, kā arī prognozējami atjaunināšanas cikli ar redzamām izmaiņu žurnāliem. Rezultāti rāda, ka saskaņotība pieaug, ja valde atbalsta vienkāršu ietvaru, indikatoru pārbauda pamatloģiku, bet atjauninājumi seko vienmērīgā ritmā, kas saglabā salīdzināmību starp periodiem. Saskaņotība vājinās, ja parādās caurspīdīgums bez konteksta, ja ierāmēšana apsteidz emocionālo pieņemšanu vai ja neregulāra komunikācija graujo salīdzināmību. AS “Latvijas Finieris”: pārvērst ESRS tematu enkurojumus īsos izmaiņu žurnālos ar tuvā termiņa starpposmiem un norādītiem atbildīgajiem, lai progress būtu auditējams starp ikgadējiem cikliem. MADARA Cosmetics: pastiprināt Globālās pārskatīšanas iniciatīvas (GPI) kartējumu ar īsu “kāpēc tieši tagad” pie katra temata, termiņos noteiktiem starpposmiem un ciešāku saiti starp piegādātāju kontrolēm un produktu līmeņa kvalitātes pierādījumiem. Valmiera Glass Group: nodomu par energoefektivitāti un atkritumu šķirošanu pārvērst kvantificētos mērķos ar bāzes līniju un gada kontrolpunktiem un apvienot rezultātus vienā atjauninājumā. Praktiskais devums ir laika dimensijai jūtīgs kadences modelis ar diagnostikām, kas palīdz pārvērst stratēģiju reproducējamā praksē nestabilitātes apstākļos. Teorētiskais devums precizē, kā interpretatīvā darba secība nosaka snieguma efektu noturību turbulentos apstākļos.

Atslēgas vārdi: interpretatīvā kadence, Eiropas ilgtspējas pārskatīšanas standarti (EIPS), Globālās pārskatīšanas iniciatīva (GPI), robežobjekti, ierāmējums vienkāršā valodā, izmaiņu žurnāli, paredzami atjauninājumu cikli, organizatoriskā saskaņotība.

HOW ARE DIGITAL TECHNOLOGIES CHANGING POWER HIERARCHIES IN ORGANIZATIONS? THE CONCEPTUAL FRAMEWORK FOR EMPIRICAL RESEARCH

Abstract. Digital technologies are transforming the internal dynamics of organizations by reshaping authority, control, and coordination mechanisms. This paper develops a conceptual framework for analyzing how digitalization alters power hierarchies, both formally and informally. Traditional hierarchical models of control are being reconfigured as decision-making becomes increasingly distributed across algorithmic systems, data infrastructures, and platform-based interactions. Drawing on socio-technical systems theory and institutional perspectives, the study conceptualizes digital power as a relational and hybrid construct emerging from the interplay of human agency, technological mediation, and organizational norms. The framework distinguishes three interrelated dimensions of change: structural redistribution of authority, procedural redefinition of decision-making, and symbolic transformation of legitimacy. Structurally, digital platforms and analytics tools decentralize expertise, shifting influence from managers to data specialists and system designers. Procedurally, algorithmic decision-support systems reshape accountability by embedding rules and priorities into technological artifacts. Symbolically, the legitimacy of power increasingly depends on the perceived objectivity, transparency, and efficiency of digital systems rather than on positional authority. The paper proposes a multi-level analytical model linking these transformations to measurable outcomes in organizational governance, trust, and employee autonomy. Methodologically, it outlines an empirical research design combining observation, digital trace analysis, and network mapping to capture the evolving configurations of digital power. The proposed framework aims to guide future empirical studies by offering conceptual clarity and methodological direction for investigating how digitalization redefines the foundations of organizational authority. The paper contributes to understanding power as an evolving, technologically mediated phenomenon that challenges conventional hierarchies and calls for new approaches to leadership, accountability, and ethical governance in the digital era.

Keywords: digitalization, power hierarchies in organizations, algorithmic management, socio-technical systems, institutional theory, governance, legitimacy, autonomy.

Introduction

Digital technologies are transforming how authority is produced, exercised, and legitimised within organisations by embedding coordination and control into data infrastructures, platforms, and algorithmic systems (Kellogg et al. 2020). Influence no longer corresponds neatly to formal ranks but flows through those who design metrics, configure thresholds, and control access to data, changing who decides, how decisions are justified, and when human judgment re-enters the process (Jarrahi et al. 2021). This transformation is structural, as data and model ownership redefine centrality; procedural, as rules and priorities become encoded in technological artefacts; and symbolic, as claims of objectivity and efficiency legitimise managerial decisions while concealing trade-offs related to fairness and accountability (Köchling, Wehner 2020).

Digital power can be understood as a relational construct emerging from the interaction between human agency, technological mediation, and institutional norms. Within institutional complexity, professionals encounter overlapping legal, market, and platform logics, producing provisional and negotiated balances rather than stable hierarchies (Greenwood et al. 2011). In labour-intensive or platform-mediated environments, algorithmic coordination strengthens control but simultaneously shifts interpretive work toward system designers. In knowledge-intensive domains, authority increasingly follows those who define data structures and model parameters rather than those who occupy formal managerial positions (Curchod et al. 2020; Newlands 2021). These tendencies improve consistency and efficiency but also introduce new dependencies and perceived losses of autonomy when explanation duties and recourse mechanisms are weak (Parent-Rochelleau, Parker 2022; Parker, Grote 2022).

This conceptual study examines how digitalisation can reshape power hierarchies in organizations across structural, procedural, and symbolic dimensions, and how these transformations affect organisational governance, trust, and autonomy. The discussion integrates research on algorithmic management, work design, and institutional theory to reveal how artefact design and technological mediation alter authority and discretion (Kellogg et al. 2020). It also interprets legitimacy work under digital transformation through the lenses of transparency, fairness, and perceived objectivity (Zuboff 2019). The goal is to develop a conceptual framework that clarifies how the diffusion of digital systems redefines organisational control, not through measurable indicators but through relational dynamics that connect technology, human agency, and institutional order (Wood et al. 2019; Krzywdzinski et al. 2024).

Literature Review

Research on digitalisation and power transformation increasingly shows that algorithms and data infrastructures become new centres of organisational control (Kellogg 2020). Algorithmic management shifts decision-making from supervision to system design, transferring discretion to those who define parameters and data flows (Keegan, Meijerink 2025). This redistribution changes authority relations by replacing direct managerial oversight with technologically mediated governance (Mahroof 2025).

From a socio-technical perspective, organisations emerge as hybrid systems where human and technological components jointly shape decisions (Page, Kallapur 2025). Power resides not only in individuals but also in the architectures that determine visibility, thresholds and access to information (Aloisi, De Stefano 2022). Institutional analysis highlights that digitalisation introduces new logics of control – efficiency, platform scalability and data protection – which coexist and often conflict with professional and bureaucratic norms (Greenwood 2011). This tension produces fluid hierarchies where authority is continuously negotiated among human actors, algorithms and institutional expectations (Zuboff 2019).

Structurally, digital platforms redistribute influence by redefining who can act, monitor or intervene. Technical experts who design and maintain algorithmic systems gain centrality because their expertise determines how formal rules translate into practice (Curchod 2020). As control becomes embedded in data architectures, power can also recentralise around small developer teams or external vendors (Krzywdzinski 2024). Procedurally, codification of decision rules in software limits discretion and transfers accountability from interpretation to configuration. Scholars emphasise that this dynamic challenges autonomy and responsibility, demanding transparency and accessible recourse mechanisms (Parent-Rochelleau 2022; Edwards 2024).

Symbolically, legitimacy is re-negotiated through narratives of objectivity, fairness and efficiency. When decisions are presented as data-driven, authority appears neutral while concealing interpretive choices embedded in algorithms (Köchling 2020). Acceptance of automated outcomes depends on transparency and the perceived ethical integrity of digital systems (Butler 2025). In this environment legitimacy derives less from formal rank and more from the credibility of technological mediation (Amoore 2020).

Recent conceptual contributions interpret algorithmic control as an institutional force that defines accountability and performance expectations across sectors (Snell 2023). Digital infrastructures not only allocate tasks but also encode normative assumptions about how cooperation and compliance should occur (Fieseler 2019). As these systems evolve, boundaries between human and machine agency blur, forming what can be described as

“parametric authority” – a condition in which influence arises from the capacity to define and modify technological parameters (Page 2025; Mahroof 2025).

Overall, the literature converges on three insights. First, digitalisation restructures authority by embedding control within technological artefacts. Second, it redefines decision procedures through codified rules. Third, it transforms the symbolic foundations of legitimacy, aligning trust with transparency and ethical clarity. These conceptual strands underpin the analytical framework developed in the next section, interpreting digital power as a relational outcome of socio-technical interaction and institutional negotiation.

Research Methodology

The methodological approach in this study is conceptual rather than empirical, designed to interpret how digital technologies reshape organisational authority across structural, procedural and symbolic dimensions. The framework draws on comparative reasoning and theoretical synthesis rather than measurement or statistical testing. Its purpose is to link abstract categories of digital power to observable organisational practices in a coherent analytical structure (Kellogg 2020; Jarrahi 2021).

The study adopts a multi-level analytical perspective that connects individual, organisational, and institutional contexts. Within this perspective, organisations are examined as socio-technical systems in which coordination, accountability, and legitimacy are increasingly mediated by algorithms and platforms (Keegan, Meijerink 2025; Mahroof 2025). The framework assumes that authority is produced not only through formal hierarchy but also through technological infrastructures that define who can act, decide, and justify actions (Page, Kallapur 2025; Aloisi, De Stefano 2022).

The conceptual design follows three layers of analysis;

(1)the structural layer interprets how digital infrastructures redistribute decision rights, redefining the positions of actors who design, monitor or regulate algorithmic systems (Curchod 2020; Krzywdzinski 2024);

(2)the procedural layer explores how codification transforms discretion into configuration, relocating judgement from people to artefacts and producing new dependencies between governance, expertise and accountability (Parent-Rochelleau 2022; Edwards 2024);

(3)the symbolic layer examines legitimacy, focusing on how digital systems create narratives of objectivity and fairness that influence acceptance and trust in organisational decisions (Köchling 2020; Butler 2025).

The methodological logic is interpretive: digital power is analysed as a relational process emerging from interactions between human agency, technological mediation, and institutional context (Greenwood 2011; Zuboff 2019). The framework, therefore, does not measure but rather maps interconnections between technological configurations, governance routines, and the perception of legitimacy. To achieve analytical coherence, insights from institutional theory, organisational sociology, and digital management research are integrated to illuminate how meaning, control, and authority shift together (Parker, Grote 2022; Snell 2023).

This conceptual methodology treats empirical materials – such as case studies from existing research, policy documents, and platform governance literature – as illustrative rather than as a statistical dataset. Such an approach enables the identification of mechanisms without the constraints of quantitative validation (Fieseler 2019; Mahroof 2025). The interpretive stance allows a broader comparative understanding of how organisations across sectors translate algorithmic technologies into power relations, whether through centralisation of control or through distributed, participatory designs.

Ethical and institutional considerations are also embedded in the conceptual framework. It assumes that digital governance must ensure transparency, protect autonomy, and maintain fairness when authority becomes technologically mediated (Amoore 2020; Köchling 2020). Attention to data stewardship, responsibility for parameter changes, and the visibility of explanation duties becomes a criterion for organisational legitimacy.

Thus, the methodological foundation of this research is not experimental but analytical: it provides an interpretive structure capable of connecting theoretical debates on algorithmic management and institutional complexity with practical concerns of governance and ethical accountability. This approach enables a systematic understanding of how digitalisation redefines the foundations of authority within organisations while preserving the multidimensional view outlined in the literature.

How Digitalisation Transforms Authority: The Conceptual Framework

The conceptual framework reveals how digitalisation transforms authority not through isolated technological effects but through the cumulative interaction of structural, procedural and symbolic mechanisms. These dimensions form an integrated pattern in which digital artefacts, human agency and institutional norms co-evolve. The synthesis below outlines the essential relationships observed across the theoretical and empirical literature.

Table 1

Conceptual synthesis of results on digital transformation of power hierarchies

Dimension	Focus of transformation	Manifestation in organisations	Theoretical interpretation
Structural	Redistribution of decision rights through digital infrastructures	Authority shifts from formal managers to data specialists and system designers who define parameters and access rules	Socio-technical realignment of roles (Kellogg 2020; Curchod 2020; Krzywdzinski 2024)
Procedural	Codification of decision rules and accountability mechanisms	Judgement and discretion are relocated to configuration stages; autonomy depends on clarity of override and recourse routines	Institutional adaptation to algorithmic governance (Parent-Rochelleau 2022; Parker 2022; Edwards 2024)
Symbolic	Redefinition of legitimacy and trust under digital mediation	Perceived transparency and fairness determine acceptance of automated outcomes	Legitimacy as perceived ethical coherence (Köchling 2020; Zuboff 2019; Butler 2025)

Source: elaborated by the author based on the literature analysis.

The table summarises the conceptual logic of how digital technologies reshape organisational power. It demonstrates that structural changes redefine who holds influence, procedural changes modify how decisions are produced and justified, and symbolic changes alter the criteria through which authority is accepted or contested. Together these shifts transform governance from a hierarchy of supervision into a network of mediation, in which authority circulates through technological systems rather than being concentrated solely in formal positions (Greenwood 2011; Jarrahi 2021).

Structurally, the redistribution of authority arises from the growing importance of data infrastructures as instruments of coordination and control. Influence concentrates among those who possess technical competence to define metrics, manage access, and modify

algorithmic thresholds (Keegan, Meijerink 2025). Formal titles remain relevant but secondary, as the ability to configure systems becomes the principal source of decision power (Mahroof 2025). This shift illustrates a move from visible hierarchy to embedded control, where governance resides in the architecture of digital tools themselves (Curchod 2020; Krzywdzinski 2024).

Procedurally, codification converts managerial discretion into technical routines. Rules once expressed in documents or practices are now inscribed in software, reducing interpretive variability but creating new dependencies on technical design (Parent-Rocheleau 2022; Parker 2022). Decisions gain predictability, yet flexibility diminishes when users cannot access or question the parameters behind algorithmic recommendations (Edwards 2024). The conceptual implication is that authority moves upstream, from momentary judgement to model governance, demanding new forms of procedural transparency. Organisations capable of documenting the rationale of their systems maintain higher legitimacy and prevent the emergence of informal workarounds that restore lost discretion.

Symbolically, legitimacy becomes tied to the visibility of reasons embedded in digital systems. When employees and stakeholders can understand why an automated decision occurred, trust and acceptance increase even in unfavourable outcomes (Köchling 2020; Butler 2025). Conversely, opacity and hidden thresholds create perceptions of bias and exclusion, turning algorithmic neutrality into a contested narrative (Zuboff 2019). Thus, technological mediation redefines the symbolic foundation of authority: credibility stems not from rank or charisma but from the perceived fairness and explainability of digital systems (Amoore 2020).

Across organisational contexts these dynamics interact in distinct ways. In labour-intensive environments, digitalisation often centralises authority around those controlling workflow platforms and compliance dashboards. In knowledge-intensive settings, power aligns with data stewardship and design capabilities rather than managerial position (Snell 2023; Fieseler 2019). Despite differences in domain, the general pattern remains: the design of artefacts determines the distribution of influence, while institutional structures adapt to accommodate new forms of control and accountability.

Governance outcomes depend on how organisations balance codification and flexibility. Excessive centralisation of parameter rights enhances consistency but weakens trust, while participatory approaches that include feedback loops and explanation duties sustain both efficiency and perceived fairness (Parent-Rocheleau 2022; Parker 2022). The challenge lies in maintaining a dynamic equilibrium where digital control is strong enough to ensure reliability yet open enough to preserve discretion and moral accountability (Greenwood 2011).

In summary, the results confirm that digitalisation reconstructs authority as a multi-level relationship. Structural redistribution shifts influence toward data-oriented roles, procedural redefinition embeds accountability into artefacts, and symbolic transformation reshapes legitimacy through transparency and trust. Together these dimensions reveal how power becomes technologically mediated and institutionally negotiated. The conceptual synthesis underscores that digital transformation is not only a technical change but a reorganisation of meaning, responsibility and ethical order within contemporary organisations.

Discussion about the Results

The discussion interprets digital power as an evolving relationship between technological mediation, institutional complexity, and organisational meaning. Authority is

no longer anchored in hierarchy but in the ability to shape parameters, define access, and justify algorithmic outcomes. This reorientation transforms the grammar of control: decision-making becomes a process of configuring systems rather than commanding subordinates (Kellogg 2020; Parker 2022).

Digitalisation does not lead to a single pattern of centralisation or decentralisation. Its effects depend on how organisations distribute design rights, interpret accountability, and maintain transparency. Concentration of parameter control strengthens technical coherence but limits participation, while distributed governance with auditable responsibilities enables constrained autonomy and preserves trust (Parent-Rochelleau 2022; Krzywdzinski 2024). The equilibrium between stability and flexibility, therefore, depends on how codification aligns with institutional norms and communication practices.

Responsibility in digitally mediated environments shifts toward those who construct models, thresholds, and evaluation schemes. When explanation mechanisms are visible and accessible, legitimacy becomes sustainable because stakeholders can trace how choices were made and on what grounds they can be revised (Köchling 2020; Edwards 2024). Where such transparency is absent, actors resort to informal interpretation, and hidden hierarchies reappear within technological infrastructures. The moral weight of governance thus lies in ensuring that digital artefacts preserve both procedural clarity and interpretive space.

Institutional plurality intensifies these tensions. Professional, legal, and platform logics often collide, creating cycles of standardisation and redesign (Greenwood 2011; Jarrahi 2021). In such environments, digital governance functions as a balancing mechanism that reconciles efficiency with fairness. Sustainable configurations emerge when organisations treat this negotiation not as crisis management but as a normal component of adaptive institutional order.

Domain variation further clarifies these patterns. In labour-intensive sectors, automation compresses discretion and heightens the importance of communication and ethical justification. In expert contexts, authority stems from ownership of data structures and interface design, which makes control deeply embedded but also more reflexive (Curchod 2020; Newlands 2021). Hence, empowerment depends on epistemic access rather than on position, and legitimacy grows when technical and organisational boundaries are transparent.

From a theoretical standpoint, digital power can be defined as parametric authority – the capacity to establish, adjust, and explain the rules encoded in technological systems (Zuboff 2019; Mahroof 2025). This concept links design decisions with institutional outcomes without assuming technological determinism. It emphasises that control through code is relational, negotiated, and reversible within organisational practice. The value of this interpretation lies in showing that algorithmic governance not only restructures authority but also introduces new ethical and epistemic responsibilities for those who design and maintain systems.

For governance, the implications are practical as well as normative. Organisations should formalise procedures for revising algorithmic parameters, publish clear documentation of decision rationales, and embed explanation duties into managerial roles. Transparent structures reduce the gap between technical expertise and accountability, transforming potential conflict into a continuous dialogue on fairness and purpose (Parent-Rochelleau 2022; Parker 2022). Digital systems thus become arenas for institutional learning rather than instruments of hidden control.

Finally, the discussion positions digitalisation as an institutional rather than purely technical phenomenon. Algorithmic tools are not neutral; they codify values and distribute responsibilities. Understanding this dynamic requires constant reflection on how data governance, explanation capacity, and ethical reasoning interact. Power in digital

organisations is therefore not a static resource but a circulating relation sustained by legitimacy, transparency, and shared understanding. The conceptual model developed here provides a theoretical foundation for studying these dynamics further and for designing governance systems that preserve both efficiency and moral coherence.

Conclusions

The study conceptualises how digital technologies reshape the foundations of organisational authority by transforming coordination, control and legitimacy into technologically mediated processes. Power in contemporary organisations no longer resides in hierarchy but in the capacity to design, interpret and justify algorithmic systems that regulate interaction. This conceptual framework explains these changes across three interconnected dimensions: structural, procedural and symbolic, linking digitalisation to the redistribution of influence, the redefinition of accountability and the reconstruction of legitimacy.

Structurally, digital infrastructures and analytical platforms alter the distribution of decision rights, granting strategic relevance to those who design and manage data systems. Procedurally, codification redefines accountability by embedding norms, priorities and evaluation criteria into technological artefacts. Symbolically, legitimacy becomes a function of perceived transparency and fairness, turning explanation capacity into a central component of organisational trust. These transformations merge technological and institutional orders, creating hybrid forms of governance in which authority is both distributed and constrained.

Conceptually, the framework positions digital power as a relational construct emerging from the interplay between human agency, technological mediation and organisational norms. It shows that authority in the digital environment is not fixed but negotiated through design choices, interpretive practices and ethical reasoning. Understanding these relations is essential for developing governance models that align efficiency with responsibility and sustain trust under conditions of algorithmic complexity.

The framework also provides theoretical direction for further empirical research. It encourages the observation of decision-making as a dynamic process shaped by technology, interpretation and institutional context. Such an approach enables comparison across organisational forms and sectors, helping to identify how digitalisation alters structures of accountability and participation.

Ultimately, the analysis emphasises that digital transformation is not only a technical evolution but also a moral and institutional one. By embedding rules within artefacts, organisations redefine how authority is exercised, contested and legitimised. Recognising this shift allows leadership and governance to evolve toward transparency, ethical coherence and participatory accountability, ensuring that technological progress reinforces, rather than undermines, the human foundations of organisational order.

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Kā digitālās tehnoloģijas maina varas hierarhijas organizācijās? Konceptuālais ietvars empīriskai izpētei

Kopsavilkums

Digitālās tehnoloģijas maina organizāciju iekšējo dinamiku, pārveidojot autoritātes, kontroles un koordinācijas mehānismus. Rakstā izstrādāts konceptuālais ietvars, kas ļauj analizēt, kā digitalizācija pārveido varas hierarhijas gan formālajā, gan neformālajā līmenī. Tradicionālie kontroles hierarhijas modeļi tiek pārveidoti, jo lēmumu pieņemšana arvien biežāk notiek algoritmiskajās sistēmās, datu infrastruktūrās un platformu mijiedarbēs. Balstoties uz sociāli tehnoloģisko sistēmu teoriju un institucionālo pieeju, pētījumā digitālā vara tiek interpretēta kā relācijas un hibrīda konstrukcija, kas rodas cilvēka aģentības, tehnoloģiskās mediācijas un organizatorisko normu mijiedarbībā. Ietvars izšķir trīs savstarpēji saistītas pārmaiņu dimensijas: strukturālu autoritātes pārdali, procedurālu lēmumu pieņemšanas pārdefinēšanu un simbolisku leģitimitātes transformāciju. Strukturāli digitālās platformas un analītiskie rīki decentralizē ekspertīzi, pārvietojot ietekmi no vadītājiem uz datu speciālistiem un sistēmu dizaineriem. Procedurāli algoritmiskās lēmumu atbalsta sistēmas pārveido atbildību, iemiesojot noteikumus un prioritātes tehnoloģiskajos artefaktos. Simboliski varas leģitimitāte arvien vairāk balstās uz digitālo sistēmu uztverto objektivitāti, pārredzamību un efektivitāti, nevis uz amatu hierarhiju. Raksts piedāvā daudzlīmeņu analītisko modeli, kas sasaista šīs pārmaiņas ar izmērāmiem rezultātiem organizāciju pārvaldībā, uzticībā un darbinieku autonomijā. Metodoloģiski piedāvāts empīriskā pētījuma dizains, kas apvieno novērošanu, digitālo pēdu analīzi un tīklu kartēšanu, lai fiksētu digitālās varas mainīgās konfigurācijas. Ietvars paredzēts kā vadlīnija turpmākiem pētījumiem, piedāvājot konceptuālu skaidrību un metodoloģisku virzienu tam, kā digitalizācija no jauna definē organizatoriskās autoritātes pamatus. Pētījums palīdz izprast varu kā mainīgu, tehnoloģiski mediētu fenomenu, kas izaicina tradicionālās hierarhijas un prasa jaunus pieejas veidus līderībai, atbildībai un ētiskai pārvaldībai digitālajā laikmetā.

Atslēgvārdi: digitalizācija, varas hierarhijas organizācijās, algoritmiskā vadība, sociāli tehnoloģiskās sistēmas, institucionālā teorija, pārvaldība, leģitimitāte, autonomija.

ADAPTABILITY OF HUMAN RESOURCE MANAGEMENT AT ENERGY ENTERPRISES TO GREEN TRANSFORMATION: CONCEPTUALIZATION AND MEASUREMENT

Abstract. This article develops a conceptual framework for understanding and potential assessment of human resource management (HRM) adaptability at energy enterprises undergoing green transformation. The purpose of the study is not to present empirical results but to clarify how HRM adaptability can be theoretically modelled, interpreted, and later operationalised through consistent indicators. Adaptability is defined as a dynamic capability of HRM that enables the organisation to synchronise human resource priorities with sustainability goals, to restructure procedures and competencies in accordance with regulatory and technological shifts, and to maintain behavioural engagement with environmental objectives. The proposed framework distinguishes three interrelated dimensions – strategic, structural, and behavioural. Strategic adaptability reflects the ability of HR leadership to align long-term workforce planning and skill investment with decarbonisation strategies. Structural adaptability concerns the redesign of HR systems, the integration of environmental criteria into performance management, and the flexibility of organisational routines. Behavioural adaptability characterises employees’ readiness for change, participation in sustainability initiatives, and acceptance of new learning and accountability patterns. Together these dimensions explain how HRM functions as a mediating mechanism that connects external drivers of the green transition with internal organisational and behavioural outcomes. A conceptual table of indicative parameters and a qualitative interpretation scale are proposed to guide theoretical evaluation of adaptability as high, moderate, or low. The framework serves as a methodological foundation for future comparative studies and as a conceptual guide for managers seeking to understand and enhance the human dimension of sustainability transformation in the energy sector.

Keywords: adaptability of human resource management (HRM), energy enterprises, green transformation, conceptual framework, strategic–structural–behavioural model, sustainability transition.

Introduction

The accelerating shift to a low-carbon economy has moved sustainability from peripheral compliance to a central driver of strategy in energy enterprises. Regulatory tightening, technology substitution and changing stakeholder expectations require organisations to realign routines, skills and incentives around environmental targets rather than incremental efficiency alone (OECD 2023; IRENA 2022; United Nations 2022; IEA 2024).

I define HRM adaptability as a dynamic capability that enables repeatable realignment of HR priorities, structures and behaviours in response to environmental imperatives and regulatory calendars. In theoretical terms, dynamic capabilities explain differences in reconfiguring resources under uncertainty, while the natural-resource-based view clarifies the strategic salience of environmental performance for long-run competitiveness (Teece et al. 1997; Teece et al. 2016; Hart 1995). In energy settings, adaptability is understood as the ability to protect competence investments for the transition, to align workforce planning with roadmap milestones, and to embed environmental criteria into performance governance rather than treat them as parallel reporting.

Green-HRM research has identified practice bundles linking training, participation and appraisal to environmental aims, yet many studies address isolated practices or generic manufacturing samples. As a result, it remains unclear how these elements should be integrated into a coherent *adaptive* HRM system in energy enterprises and how such adaptability could be assessed without presuming the availability of data (Renwick et al. 2013; Guerri et al. 2016; Renwick et al. 2016).

The aim of this article is to conceptualise HRM adaptability in the context of green transformation and to outline how it may be assessed in principle. I distinguish three

interrelated dimensions – strategic, structural and behavioural – and propose a conceptual scheme that links external drivers, organisational factors and anticipated outcomes. The approach is explicitly context-sensitive: geographical, cultural, political and institutional differences imply that indicators and interpretation should be adapted across settings (for example, what supports adaptability in China may not travel unchanged to Latvia).

The article offers an indicative table of parameters and a qualitative interpretation scale (high, moderate, low) to guide prospective assessment. No empirical results are reported; the framework is intended as an instruction-like basis for future diagnostics in energy enterprises and as a reference for subsequent empirical studies (Jabbour, de Sousa Jabbour 2016; Tang et al. 2018; Jabbour et al. 2020; OECD 2023; IEA 2024).

Literature Review

Green HRM has progressed from catalogues of practices to configurations and the mechanisms that make them effective. Early reviews showed that environmental outcomes stem from aligned bundles of recruitment, training, involvement, and appraisal framed as an integrated agenda (Renwick et al. 2013). Later work emphasises context, the prioritisation of bundles and their compatibility with sustainability goals, with green organisational culture acting as a conduit to environmental performance (Renwick et al. 2016; Ren et al. 2018).

Empirical studies identify a mediating channel whereby targeted HR practices translate stakeholder pressure into environmental performance, shifting attention from recording the presence of practices to understanding how HR systems adapt to sustainability requirements (Guerci et al. 2016). Scale-development research offers validated items on training, participation and the embedding of environmental criteria in performance management that can inform future sector-specific adaptations, with attention to unit-level moderators (Tang et al. 2018).

A further strand links green HRM with operations and supply chains: aligning HR practices with green procurement, process redesign and supplier development strengthens environmental performance, especially when digital and circular transformations proceed in parallel (Jabbour, de Sousa Jabbour 2016; Jabbour et al. 2020). In energy industries, this linkage is salient because decarbonisation synchronises changes in generation, networks and services, while digitalisation accelerates the reconfiguration of competences and procedures (OECD 2023; IRENA 2022; IEA 2024).

Industry and macro sources shape pressures and planning horizons. Green-growth indicators increase the density of metrics that organisations may need to interpret within workforce planning and performance governance; transition roadmaps describe accelerated roll-outs that call for new competence profiles, reskilling and timely certification; labour assessments record rapid job growth in renewables and grid modernisation with implications for just transition (OECD 2023; IEA 2024; IRENA 2022; IRENA/ILO 2024; United Nations 2022). Recent sectoral studies suggest transferability of green HRM logics to power utilities and adjacent infrastructures, including evidence on performance and career quality in public utilities (Al-Oun, Al-Khasawneh 2025; Weishaupt 2025).

Theoretically, HRM adaptability draws on dynamic capabilities and the natural-resource-based view: organisations differ in how they reconfigure resources under uncertainty, and environmental performance gains strategic salience as a source of long-term value (Teece et al. 1997; Teece et al. 2016; Hart 1995). Synthesising these lines supports a multidimensional interpretation that distinguishes strategic alignment of HR priorities with innovation and regulatory calendars, structural redesign of workforce planning, training, and appraisal, and behavioural readiness to adopt eco-innovations and participate in initiatives. In this article, these insights are used to ground a conceptual framework and a qualitative interpretation scheme; **no**

operationalisation or measurement is undertaken here, and any future indicator work should be adapted to sectoral and institutional context using existing scales and organisational evidence only in subsequent empirical studies (Tang et al. 2018; OECD 2023; IEA 2024).

Research Methodology

Purpose and approach. This section presents a procedural, instruction-like framework that explains how HRM adaptability should be assessed at energy enterprises as an observable dynamic capability. The text does not report data, indices or tests; it specifies concepts, evidence to review, indicative parameters and a qualitative interpretation scale suitable for future diagnostics (Renwick et al. 2013; Renwick et al. 2016).

Conceptual definition and dimensions. HRM adaptability is understood as the organisation's capacity to realign HR priorities, structures and behaviours with transition roadmaps and regulatory calendars. Three interrelated dimensions are distinguished:

- strategic – alignment of HR planning and competence investment with decarbonisation milestones and regulatory rhythms;
- structural – redesign of roles, procedures, training and appraisal with embedded environmental criteria;
- behavioural – readiness for change, participation in sustainability initiatives and cross-functional collaboration (Tang et al. 2018; Guerri et al. 2016).

Unit of assessment and evidence. The unit should be an energy enterprise or a distinct production/grid division. Evidence may include: HR strategy and plans, role profiles with criteria, performance and training documents, change logs and release notes, internal communications, HSE and internal audit records, and sectoral transition reports for contextual timing (OECD 2023; IEA 2024; IRENA 2022).

Table 1

Indicative parameters for prospective assessment

Dimension	What to examine	Indicative parameters (what should be visible)	Evidence to review
Strategic	Coherence of HR with transition roadmaps and regulatory calendars	Documented top-management decisions on HR–sustainability; competence plans tied to transition milestones; protected budgets for reskilling in transition-critical roles; scheduled reviews aligned with regulatory updates	Board minutes; HR strategy; competence plans; budget notes; responsibility matrices (OECD 2023; IEA 2024; IRENA 2022)
Structural	Embedding of environmental criteria in roles and processes	Environmental criteria present in role profiles and appraisal; certified training coverage for risk-exposed roles; defined procedure-update rule after regulatory change; predictable staff communication of updates	Role/KPI cards; procedures and checklists; training plans; change logs; internal communications (Renwick et al. 2016; Guerri et al. 2016)
Behavioural	Readiness and participation supporting implementation	Participation in sustainability initiatives; follow-through from approval to implementation; routine HR–HSE–Operations coordination; post-rollout audit practice	Initiative registers; implementation logs; coordination records; HSE/internal audit reports (Tang et al. 2018; Renwick et al. 2013)

Source: compiled by the author.

Parameters are **instructional** (what should be present), they **should** be adapted to country, subsector, and institutional context (Teece et al. 1997; Teece et al. 2016; Hart 1995).

Assessment proceeds from the external context to the examination of the three dimensions (strategic, structural, behavioural) and then to an overall qualitative judgement (high, moderate, low) according to the interpretation rule.

Qualitative interpretation scale:

(1)high adaptability. Strategic decisions, processes and behaviours are coherent and consistently enacted; competence budgets are protected; HR plans track transition milestones; environmental criteria are embedded and acted upon; initiatives reach implementation with routine HR–HSE–Operations coordination;

(2)moderate adaptability. Core elements are present but linkages are partial or irregular; updates occur yet integration into routines is uneven; coverage of certified training or embedded criteria is incomplete;

(3)low adaptability. Fragmented, formalistic change; declarations without protected budgets or responsible ownership; plans not tied to regulatory rhythms; environmental criteria remain parallel reporting; participation is episodic.

Rule for overall judgement:

(1)high → at least two dimensions judged high and none low;

(2)low → any one dimension judged low and none high;

(3)otherwise → moderate.

Procedure for prospective use:

(1)clarify external context (regulatory, technological, market, cultural) and enterprise scope;

(2)map HR processes linked to transition (planning, competence development, performance, communication);

(3)collect documentary and observational evidence for each dimension;

(4)judge each dimension against the indicative parameters; record short justifications;

(5)form an overall qualitative conclusion (high, moderate, low) using the rule above and note context-specific caveats (Jabbour, de Sousa Jabbour 2016; Tang et al. 2018; Jabbour et al. 2020).

Context sensitivity and limitations. Indicators and interpretation should be adjusted to geographical, cultural, political and institutional conditions; what supports adaptability in one setting may require modification in another (Teece et al. 1997; Teece et al. 2016; Hart 1995). The framework serves as a conceptual, instruction-like basis for future diagnostics and for the design of subsequent empirical studies, not as a report of measured results.

Results of the Study

This section presents the conceptual outcomes of the study in narrative form. The paper clarifies what is meant by HRM adaptability in energy enterprises undergoing the green transition, organises this construct into an integrated three-dimension model with a clear diagnostic logic, and provides a qualitative way to judge adaptability that remains comparable across enterprises while staying sensitive to context (Renwick et al. 2013; Renwick et al. 2016).

HRM adaptability is articulated as the organisation's capacity to realign HR priorities, structures and behaviours with transition roadmaps and regulatory calendars, treating adaptability as an observable dynamic capability rather than a declaration of intent. Anchoring the construct in dynamic capabilities explains why reconfiguration speed and coherence differ across firms under uncertainty, while the natural-resource-based view clarifies the strategic salience of environmental performance for long-run competitiveness

in energy settings (Teece et al. 1997; Teece et al. 2016; Hart 1995). From this articulation follows a practical orientation: assessment should focus on evidence of repeatable realignment captured in plans, procedures and routines instead of isolated initiatives or post-hoc claims (OECD 2023; IEA 2024).

The integrated model distinguishes strategic, structural and behavioural dimensions and explains how judgement should proceed across them using indicative parameters rather than numerical indices. In line with bundle logic in green HRM, effects are expected to emerge when aligned practices co-occur, not when single practices are examined in isolation (Renwick et al. 2013; Renwick et al. 2016; Tang et al. 2018; Guerçi et al. 2016). Strategically, attention should be given to whether HR planning and competence investment are tied to decarbonisation milestones and regulatory rhythms and whether top-management decisions and protected budgets are visible where transition risk is concentrated (OECD 2023; IRENA 2022). Structurally, attention should be given to the embedding of environmental criteria in roles and appraisal, the coverage of certified learning for risk-exposed roles, and the timeliness of procedure updates and staff communication after rule changes (Renwick et al. 2016; Guerçi et al. 2016). Behaviourally, attention should be given to participation in sustainability initiatives, the follow-through from approval to implementation, routine HR–HSE–Operations collaboration and the presence of post-rollout audit practice (Tang et al. 2018; Renwick et al. 2013).

The framework translates these directions into a qualitative typology of adaptability levels. High adaptability is understood as a state in which strategic decisions, processes and behaviours are coherent and consistently enacted; competence budgets are protected where they matter; HR plans track transition milestones; environmental criteria are embedded and acted upon; and implementation is supported by routine cross-functional coordination (OECD 2023; IEA 2024). Moderate adaptability is understood as a state in which core elements are present but linkages remain partial or irregular, updates take place yet integration into routines is uneven, and the coverage of certified training or embedded criteria is incomplete (Renwick et al. 2016; Tang et al. 2018). Low adaptability is understood as fragmented and formalistic change where declarations are not matched by protected budgets or responsible ownership, plans are not tied to regulatory rhythms, environmental criteria remain parallel reporting, and participation is episodic (Guerçi et al. 2016; Renwick et al. 2013).

To maintain transparency without resorting to numbers, the overall qualitative judgement is formed after the three partial judgements are recorded with short justifications. An enterprise is judged high when at least two dimensions are high and none is low; it is judged low when any one dimension is low and none is high; in all other cases the judgement is moderate. This rule reads across cases without implying statistical aggregation and preserves the instruction-like character of the framework.

The results also include context-sensitivity propositions to avoid false uniformity. Where regulatory calendars are dense and predictable, strategic adaptability should rely on scheduled HR reviews and protected competence budgets tied to milestone dates; where calendars are volatile, structural timeliness in procedure updates and communications should carry greater interpretive weight (OECD 2023; IEA 2024). In enterprises with fast technology substitution, structural embedding of criteria and certified learning for risk-exposed roles should be treated as necessary conditions for judging adaptability as above moderate (IRENA 2022). In dispersed organisations, routine HR–HSE–Operations practices should receive particular attention because cross-site coordination requires stronger behavioural glue (Renwick et al. 2016). In contexts with low prior acceptance of environmental goals, the behavioural dimension should weigh more through participation and communication routines, whereas in high-acceptance contexts the emphasis should shift

to disciplined follow-through and closure (Tang et al. 2018; Guerci et al. 2016). For comparability, the unit of judgement should remain an enterprise or a distinct division; sectoral reports may inform timing but should not be mistaken for internal evidence (OECD 2023; IEA 2024).

For managers and reviewers, the read-across is straightforward. Before claiming adaptability, it should be possible to point to explicit leadership decisions and protected budget lines, to the embedding of environmental criteria and the timely updating of procedures, and to cross-functional routines that carry initiatives from approval to implementation with post-rollout checks. For reviewers, the model provides a transparent basis for consistency in qualitative judgement across cases while deliberately avoiding numerical indices or statistical testing (Renwick et al. 2013; Renwick et al. 2016).

In sum, the results provide a complete conceptual scaffold that joins a precise definition, an integrated diagnostic logic across three dimensions, a qualitative interpretation scheme and context-sensitivity propositions. The scaffold is designed to be used as a step-by-step guide for prospective assessment of HRM adaptability in energy enterprises while deliberately refraining from empirical claims or measurements (OECD 2023; IEA 2024; IRENA 2022; Tang et al. 2018; Guerci et al. 2016).

Conclusions

The paper has set out a disciplined way to read the human side of the green transition in energy enterprises without advancing empirical claims. It consolidates the notion of HRM adaptability into a three-fold structure and shows how judgement can proceed on the basis of verifiable organisational evidence rather than declarations. The emphasis is on what can be observed in plans, procedures and routines, and on how those observations can be weighed to reach a transparent qualitative conclusion.

In managerial use, the framework turns strategy into everyday practice by directing attention to a small number of signs that ought to be visible if adaptability is present: explicit alignment between transition roadmaps and HR planning, the embedding of environmental criteria into role design and performance governance, and the maintenance of participation and cross-functional collaboration beyond one-off initiatives. Read in this order, the approach helps reviewers and leaders identify where alignment or follow-through is weakest and to concentrate corrective action accordingly.

A consistent thread throughout is sensitivity to context. Differences in regulatory cadence, technological change, organisational design and cultural acceptance mean that no single checklist travels unchanged. The framework therefore asks the assessor to record why particular parameters are given greater or lesser weight in a given setting, so that the final qualitative judgement remains comparable yet explained.

The limits of the work are clear. It is a conceptual contribution that provides language, parameters and a rule for qualitative judgement; it does not report measurements. Further development can include piloting in specific subsectors, refining sector-relevant parameters, extending attention to just-transition considerations and partner networks, and exploring longitudinal use to see how qualitative judgements evolve as enterprises update procedures and capabilities over time.

Taken together, the model, the indicative parameters and the qualitative scale offer a workable basis for diagnostic reading and managerial learning. They link transition intent to observable people-management practice, support consistent, audit-ready conclusions about the level of adaptability, and open a pathway for subsequent empirical work without presupposing it.

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Cilvēkresursu vadības pielāgojamība enerģētikas uzņēmumos zaļajai transformācijai: konceptualizācija un mērījumi

Kopsavilkums.

Raksts izstrādā konceptuālu ietvaru cilvēkresursu vadības (CRV) pielāgojamības izpratnei un iespējamai novērtēšanai enerģētikas uzņēmumos, kas īsteno zaļo transformāciju. Pētījuma mērķis nav sniegt empīriskus rezultātus, bet gan teorētiski parādīt, kā CRV pielāgojamība var tikt modelēta, interpretēta un vēlāk operacionalizēta, izmantojot konsekventus rādītājus. Pielāgojamība tiek definēta kā HRM dinamiskā spēja saskaņot cilvēkresursu prioritātes ar ilgtspējas mērķiem, pārstrukturēt procedūras un kompetences atbilstoši regulatīvajām un tehnoloģiskajām pārmaiņām, kā arī uzturēt darbinieku uzvedības iesaisti vides mērķu sasniegšanā. Piedāvātais ietvars ietver trīs savstarpēji saistītas dimensijas – stratēģisko, strukturālo un uzvedības. Stratēģiskā pielāgojamība atspoguļo HR vadības spēju saskaņot ilgtermiņa darbaspēka plānošanu un prasmju ieguldījumus ar dekarbonizācijas stratēģijām. Strukturālā pielāgojamība attiecas uz HR sistēmu pārveidi, vides kritēriju integrēšanu snieguma vadībā un organizatorisko rutīnu elastību. Uzvedības pielāgojamība raksturo darbinieku gatavību pārmaiņām, līdzdalību ilgtspējas iniciatīvās un jaunu mācīšanās un atbildības modeļu pieņemšanu. Kopā šīs dimensijas izskaidro, kā CRV darbojas kā starpniekmehānisms, kas savieno zaļās pārejas ārējos faktorus ar iekšējiem organizatoriskajiem un uzvedības rezultātiem. Rakstā piedāvāta konceptuāla tabula ar indikatīviem parametriem un kvalitatīva interpretācijas skala, kas ļauj teorētiski novērtēt HRM pielāgojamības līmeni kā augstu, vidēju vai zemu. Ietvars kalpo kā metodoloģisks pamats turpmākiem salīdzinošiem pētījumiem un kā konceptuāla rokasgrāmata vadītājiem, kuri vēlas izprast un stiprināt cilvēkfaktora nozīmi ilgtspējīgas transformācijas procesā enerģētikas nozarē.

Atslēgvārdi: cilvēkresursu vadības (CRV) pielāgojamība, enerģētikas uzņēmumi, zaļā transformācija, konceptuālais ietvars, stratēģiski–strukturāli–uzvedības modelis, ilgtspējas pāreja.

**BUILDING THE “THIRD CULTURE”:
A MIXED-METHODS STUDY OF CULTURAL ADAPTATION
STRATEGIES FOR CHINESE AND EUROPEAN MULTINATIONAL PROJECT
TEAMS**

Abstract. The concept of the “Third Culture” provides a valuable framework for understanding how Chinese and European multinational project teams manage cultural adaptation in complex international environments. Originally introduced in the 1960s by John and Ruth Useem, who studied children raised between cultures, the term describes the emergence of a shared hybrid culture that develops when individuals from distinct cultural backgrounds engage in sustained collaboration. Within the context of joint Sino-European projects, the Third Culture represents a negotiated set of shared norms, values, and behavioral patterns that transcend participants’ original cultural frameworks. Rather than requiring one group to assimilate into the other’s practices, team members co-create a new cultural space that integrates elements from both sides – for example, blending hierarchical respect typical of Chinese organizational culture with the participatory communication styles common in European settings. This process fosters mutual understanding, reduces conflict, and enhances coordination by establishing a functional culture specifically tailored to the team’s joint goals. The Third Culture is dynamic rather than static; it evolves through continuous interaction, reflection, and adaptation as participants learn from each other and refine their collective working practices. This study employs a mixed-methods design combining qualitative and quantitative approaches to analyze how Third Cultures are formed and sustained in multinational settings. The research integrates Hofstede’s cultural dimensions framework to map key value differences and adaptation mechanisms, followed by quantitative secondary data review and comparative analysis of previous studies on cross-cultural collaboration in Chinese and European contexts. Together, these methods provide a comprehensive perspective on how hybrid cultural identities emerge, stabilize, and influence project outcomes, offering practical implications for managers seeking to foster effective intercultural cooperation in multinational environments.

Keywords: “Third Culture”, cultural dimensions by Hofstede, cultural adaptation, Chinese-European multinational teams.

Introduction

The rapid globalization of business and technology has intensified cooperation between China and Europe, particularly in multinational projects that require close interaction between professionals from distinct cultural backgrounds (European Commission et al. 2015). Yet, while such collaborations hold immense potential for innovation and growth, they often encounter significant cultural barriers that hinder trust, communication, and efficiency (Buck et al. 2010). These challenges highlight the topicality of studying intercultural adaptation processes and the mechanisms through which a shared hybrid culture – a “Third Culture” – emerges to facilitate cooperation. As Zhao et al. (2025) note, differences in hierarchical structures and uncertainty management between Chinese and European partners frequently generate misunderstandings in joint ventures, affecting project performance and organizational harmony. Understanding and managing these dynamics has therefore become a central concern for both scholars and practitioners engaged in cross-border collaboration.

The concept of the Third Culture offers a powerful framework for interpreting how individuals and organizations from diverse cultural backgrounds negotiate shared working norms. Originating from the sociological research of John and Ruth Useem in the 1960s, the term “Third Culture” initially described children who grew up between different national environments – so-called “Third Culture Kids” – and developed hybrid cultural identities that combined elements of their parents’ and host societies. Over time, this notion was adapted to organizational and intercultural studies, where it came to signify the co-creation of shared norms and practices within multicultural teams (Useem, Useem 1967; Pollock, van

Reken 2009; Marchal Jones et al. 2022). In the context of Sino-European project teams, the Third Culture does not imply the dominance of one side over another but rather a negotiated middle ground in which members from both cultures contribute to a new set of collective rules, values, and behaviors.

This hybrid culture manifests through the blending of cultural dimensions such as hierarchy, communication style, and risk orientation. For instance, while Chinese management traditions emphasize hierarchical authority and relational harmony, European organizations often value egalitarianism, direct communication, and participatory decision-making (Hofstede 2001; Hofstede et al. 2010). As Jia, Rutherford, and Lamming (2014) observed in their study of buyer–supplier relationships, when Western and Chinese actors interact over time, they develop a functional hybrid culture that accommodates both sides’ expectations, enhancing cooperation without requiring full assimilation. In this sense, Third Culture building represents the most integrative form of cultural adaptation: it transcends assimilation and separation by fostering mutual learning and creative synthesis.

Despite the conceptual richness of the Third Culture framework, research gaps remain regarding its formation processes and practical implications within Chinese–European multinational teams. Prior ethnographic and qualitative studies (Zhao 2007; Vigier 2014) have revealed the complexities of intercultural adaptation in educational and project-based contexts, while Liu (2015) and Long (2016) have explored similar processes among Chinese migrants and international school students, respectively. These studies collectively underscore that cultural adaptation involves more than individual psychological adjustment; it is a systemic and relational process shaped by context, communication patterns, and shared goals. Yet, empirical research integrating both qualitative insights and quantitative analysis remains limited, particularly in the domain of international project management.

The present study addresses the problem of insufficient empirical understanding of how Chinese and European multinational project teams construct and sustain Third Cultures as adaptive mechanisms to overcome deep-seated cultural barriers in communication, hierarchy, and decision-making. The purpose of this research is to identify and systematize the specific intercultural adaptation strategies through which hybrid working norms are formed, stabilized, and translated into effective project collaboration. More concretely, the study investigates how Chinese and European team members negotiate and reconcile their differing orientations across three of Hofstede’s key cultural dimensions – power distance, uncertainty avoidance, and individualism versus collectivism (Hofstede 2001). It aims to determine how variations in authority perception, tolerance for ambiguity, and group identity influence the emergence and sustainability of shared hybrid cultures in multinational settings.

Methodologically, this study employs a mixed-methods approach combining qualitative and quantitative techniques. The qualitative component includes content analysis of prior ethnographic and organizational case studies (Zhao 2007; Vigier 2014; Liu 2015; Long 2016) to capture the lived experiences of cross-cultural adaptation and the narratives through which participants build the “Third Culture”. The quantitative component incorporates a secondary data review and analysis of comparative cultural metrics drawn from Hofstede’s framework, with particular attention to the power distance, uncertainty avoidance, and individualism scores across selected European countries and China (The Culture Factor Group Oy 2025). These dimensions are analyzed to map patterns of convergence and divergence that shape intercultural collaboration. Together, these complementary methods enable a holistic view of both subjective and structural factors in Third Culture formation.

The data sources encompass peer-reviewed academic literature, doctoral theses, and official reports, including the European Commission’s, DG’s Education and Culture, and

Ministry's of Culture of the People's Republic of China "Mapping the EU – China Cultural and Creative Landscape" (2015). This multi-source foundation ensures both theoretical and empirical validity, aligning micro-level qualitative insights with macro-level quantitative indicators.

Content analysis of prior ethnographic and organizational case studies

To situate the present research within a broader empirical context, this section synthesizes insights from a set of prior ethnographic and organizational case studies that examined intercultural adaptation and the emergence of hybrid or "Third Culture" identities in Chinese and cross-cultural settings. These studies, conducted across academic, professional, and migratory environments, provide valuable micro-level evidence of how individuals and teams negotiate meaning, manage cultural dissonance, and gradually develop shared norms through sustained intercultural interaction. This comparative review thus establishes a qualitative foundation for the subsequent analysis of adaptation dynamics in Chinese–European multinational project teams.

The case study of the intercultural adaptation process between Chinese students and their British lecturers and fellow students in the UK by Tianshu Zhao (University of Southampton, 2007) explores the lived experiences of Chinese MBA students and their British counterparts as they navigate cultural and academic adaptation in a British university setting. Zhao's research employs an ethnographic and interpretive qualitative approach, using participant observation, semi-structured interviews, and grounded theory analysis to reveal how both groups mutually construct an intercultural academic identity – a hybrid form of the "Third Culture".

The lived experiences of adaptation are characterized by three progressive stages: initial unfamiliarity and anxiety, gradual adjustment, and eventual relaxation and integration. Participants' narratives reveal both behavioral and emotional transformations as they oscillate between retaining familiar cultural values and embracing new ones (Zhao 2007). Chinese students, for instance, initially struggle with participatory classroom norms, while British lecturers gradually adapt to alternative learning expectations. Through continuous interaction, both sides engage in identity negotiation, developing intercultural sensitivity, empathy, and what Zhao terms Intercultural Adaptation Competence (IAC) – a blend of cognitive, affective, and behavioral adaptability (Zhao 2007).

The case study of interaction in multicultural project-team meetings (in particular, managing the formative stages) by Mary (Miriam) Vigier (University of Warwick, 2014) explores the lived experiences of cross-cultural adaptation among members of newly formed multicultural project teams within a multinational company in France. The study investigates how professionals from diverse linguistic and cultural backgrounds collaborate in English as a business lingua franca, negotiate meaning, and develop effective team-working practices during the early stages of joint projects.

Drawing on ethnographic-like case studies that combine observation and interviews, Vigier examines how participants construct shared communicative norms and manage interactional challenges linked to cultural, linguistic, and professional diversity (Vigier 2014). The narratives reveal an evolving process of adaptation marked by initial uncertainty, negotiation of roles and communication styles, and eventual emergence of trust and cohesion. Participants describe moments of misunderstanding and power imbalance due to asymmetries in English proficiency or divergent expectations about hierarchy and teamwork. Yet through repeated dialogue, clarification, and reflection, the teams gradually co-create a hybrid communicative space grounded in mutual respect and functional cooperation (Vigier 2014).

The case study of intercultural communication competence, adaptation context, and acculturation strategies among Chinese immigrants in Spain by Qin Liu (Universitat Autònoma de Barcelona, 2015) explores how members of the Chinese community in Barcelona experience cross-cultural adaptation and develop hybrid identities through everyday narratives of negotiation and change. Based on surveys and semi-structured interviews with 50 immigrants, the study identifies four acculturation modes – integration, assimilation, separation, and marginalization – following Berry’s theoretical model (Berry 2005). These categories are used to examine how generation and socioeconomic status shape intercultural competence, coping strategies, and psychological adjustment (Liu 2015).

The lived experiences of participants reveal the complexity of adapting to Spanish society while maintaining links with Chinese cultural identity. First-generation immigrants often rely on ethnic networks and adopt separation or avoidance strategies to cope with linguistic and social barriers. By contrast, younger and higher-SES individuals exhibit integrative or assimilative orientations, achieving better functional adaptation through Spanish language proficiency, friendships with locals, and participation in intercultural workplaces (Liu 2015). Emotional and practical difficulties – such as family fragmentation, discrimination, and limited social mobility – emerge as recurring challenges, yet many participants reframe these experiences as opportunities for personal growth and self-discovery.

Through continuous negotiation between cultural identification and social belonging, participants construct what can be described as a “Third Culture”, an intercultural space combining Chinese perseverance and collectivism with Spanish sociability and openness. Narratives of resilience – such as self-improvement, mutual support, and pragmatic adaptation – illustrate how immigrants internalize both cultures to achieve balance and agency. Liu concludes that this hybrid cultural identity functions as an adaptive mechanism allowing immigrants to navigate between two worlds, transforming structural constraints into shared intercultural competence and contributing to Spain’s evolving multicultural landscape (Liu 2015).

The case study of the cross-cultural identity of Chinese students educated in a Western-curriculum international school by Daniel T. Long (Northeastern University, 2016) examines how ethnically Chinese students living in their home country but educated in Western-style international schools experience identity formation and cultural adaptation. Using an interpretative phenomenological approach, Long explores how these students negotiate the intersection between Chinese cultural traditions and Western academic values, revealing a complex process of hybrid identity construction.

The lived experiences of participants reflect feelings of being “in-between” cultures – fluent in English and accustomed to Western pedagogy yet emotionally and socially tied to Chinese familial expectations (Long 2016). This duality often generates internal tension, confusion about belonging, and a struggle to define selfhood. Students recount moments when they feel “not completely Chinese, but not Western either”, embodying what Pollock and van Reken (2009) describe as the Third Culture – an emergent identity formed at the intersection of multiple cultural systems.

Language plays a central role in shaping their intercultural experience, functioning both as a bridge and a boundary. The Western-academic environment challenges traditional Chinese norms of hierarchy and conformity, encouraging independence and critical thought, which many participants embrace but also find disorienting. Over time, however, they develop coping strategies through peer networks, family dialogue, and self-reflection, transforming this tension into adaptive competence (Long 2016).

Through their narratives, these students construct a new cultural synthesis that transcends national definitions. The “Third Culture” becomes a lived, evolving space in

which they learn to integrate Eastern collectivism with Western individualism (Long 2016). Long's findings illuminate the psychological, linguistic, and social processes through which Asian Third Culture Kids create meaning and stability amid competing cultural expectations, thereby expanding the concept of Third Culture identity beyond its traditional Western framework.

Taken together, these ethnographic and organizational studies demonstrate that the construction of the Third Culture emerges as a dynamic, relational process shaped by context, communication, and shared purpose rather than by static cultural traits. Across educational, professional, and migratory environments, participants engage in mutual accommodation, developing hybrid practices that balance hierarchy with dialogue, conformity with creativity, and tradition with innovation. This synthesis occurs not through the erasure of cultural differences but through their ongoing negotiation in everyday interaction. The reviewed cases thus underscore that successful adaptation depends on reflexivity and trust, which allow intercultural actors to reinterpret norms and create new frameworks of collaboration.

However, while these qualitative findings richly portray the lived experience of adaptation, they also reveal the need for a systematic, comparative perspective capable of quantifying the underlying structural differences that shape such processes. The following section therefore turns to a secondary data review and quantitative analysis grounded in Hofstede's cultural dimensions – particularly power distance, uncertainty avoidance, and individualism – to identify measurable patterns of convergence and divergence between China and selected European countries. By linking these macro-level indicators with the micro-level narratives discussed above, the study moves toward an integrated understanding of how distinct value orientations condition the formation and sustainability of the Third Culture in Chinese–European multinational project teams.

Secondary data review and analysis of comparative cultural metrics

Geert Hofstede developed a systemic framework for analyzing and comparing national cultures by identifying dimensions that capture fundamental value differences across societies. His approach was based on large-scale surveys of IBM employees conducted in more than seventy countries, which allowed him to measure consistent cultural patterns in attitudes, behaviors, and organizational practices (Hofstede 2001). Hofstede argued that cultural values shape how individuals perceive authority, uncertainty, relationships, and decision-making, and that these values remain relatively stable over time. The dimensions he identified – such as power distance, uncertainty avoidance, and individualism – provide a structured way to compare countries and understand the implications of cultural variation in business, management, and cross-border cooperation (Hofstede 2001; Hofstede et al. 2010).

Within this framework, power distance refers to the extent to which less powerful members of a society accept and expect inequalities in power distribution. High power distance cultures tolerate and reinforce hierarchical structures, centralized decision-making, and clear status differences, while low power distance cultures emphasize equality, participative leadership, and flatter organizational systems. Uncertainty avoidance describes how societies manage ambiguity, risk, and the unknown. Cultures with strong uncertainty avoidance prefer rules, formal procedures, and risk minimization strategies, whereas cultures with weak uncertainty avoidance are more comfortable with ambiguity, flexible structures, and innovation (Hofstede et al. 2010).

The third dimension – individualism versus collectivism – captures how societies balance the relationship between the individual and the group. In highly individualistic cultures, people prioritize personal goals, autonomy, and self-expression, while in

collectivist societies, loyalty, social harmony, and group cohesion are emphasized. This dimension is crucial in understanding Sino-European cooperation, as Chinese organizations traditionally exhibit collectivist orientations, whereas most European cultures lean toward individualism to varying degrees.

To provide a clearer and more nuanced view of these differences, Table 1 presents the comparative scores of power distance, uncertainty avoidance, and individualism across selected European countries and China. Europe is divided into five macro-regions – Northern, Western, Central, Eastern, and Southern Europe – based on geographical, historical, and socio-cultural distinctions that influence managerial values and behavioral norms (Čižo et al. 2023). This regional grouping enables the identification of intra-European variation, acknowledging that Europe does not represent a homogeneous cultural entity but a mosaic of sub-regions shaped by diverse traditions, religious legacies, and institutional trajectories. This classification allows for a more precise interpretation of cultural contrasts when compared to China’s distinctive configuration, where high power distance (80) coexists with low uncertainty avoidance (30) and moderate collectivism (43) (The Culture Factor Group Oy 2025). The resulting overview in Table 1 establishes a quantitative foundation for the subsequent discussion of intercultural dynamics in Chinese–European multinational project teams.

Table 1

Some cultural dimensions (Power Distance, Uncertainty Avoidance, Individualism) in China and Europe, scores from 0 to 100

Countries / Cultural dimensions	Power Distance	Uncertainty Avoidance	Individualism
China	80	30	43
Eastern Europe			
Latvia	44	63	70
Lithuania	42	65	55
Ukraine	92	95	55
Mean	59	74	60
Central Europe			
Hungary	46	82	71
Slovenia	71	88	81
Czechia	57	74	70
Mean	58	81	74
Western Europe			
Netherlands	38	53	100
United Kingdom	35	35	76
Belgium	65	94	81
Mean	46	61	86
Northern Europe			
Sweden	31	29	87
Norway	31	50	81
Finland	33	59	75
Mean	32	46	81
Southern Europe			
Croatia	73	80	40
Spain	57	86	42
Greece	60	100	57
Mean	63	89	46

Source: elaborated by the author using the data of The Culture Factor Group Oy 2025.

The comparative data presented in Table 1 illustrate distinct regional patterns across Hofstede's cultural dimensions of power distance, uncertainty avoidance, and individualism in Europe and China. China's high power distance score (80) confirms its enduring hierarchical orientation, where authority is centralized, social roles are clearly defined, and deference to leadership is culturally embedded. In contrast, Western and Northern Europe, represented by countries such as the Netherlands (38) and Sweden (31), demonstrate low power distance, reflecting egalitarian social structures and preference for participatory management. Central and Eastern Europe occupy a middle position, with countries such as Hungary (46) and Latvia (44) displaying moderate acceptance of hierarchy, while Southern Europe, exemplified by Croatia (73), aligns more closely with China's respect for authority and vertical decision-making traditions.

Patterns of uncertainty avoidance show even greater diversity. Societies such as Greece (100), Slovenia (88), and Hungary (82) display strong uncertainty avoidance, indicating a pronounced preference for order, formal procedures, and predictable outcomes. Conversely, Sweden (29), the United Kingdom (35), and China (30) exhibit low uncertainty avoidance, suggesting a higher tolerance for ambiguity and greater flexibility in decision-making. This configuration reveals that while much of Europe adheres to procedural and stability-oriented approaches, Northern and Western Europe share with China a pragmatic openness to situational adaptation and risk-taking. These differences imply that potential cultural frictions in multinational projects may arise not only from hierarchical expectations but also from divergent attitudes toward risk and structure.

The inclusion of the individualism dimension enriches this analysis by demonstrating how autonomy and group orientation intersect with the previous two variables. Northern and Western Europe again lead with the highest individualism scores (Sweden 87, Netherlands 100), reflecting emphasis on personal initiative and self-expression. Central Europe also trends toward individualism (mean 74), whereas Southern and Eastern Europe display more collectivist tendencies (means 46 and 60, respectively). China's moderate score (43) situates it firmly within the collectivist spectrum, emphasizing loyalty, harmony, and interdependence over individual ambition. This contrast explains why European partners often value transparent dialogue and personal accountability, while Chinese counterparts prioritize relational balance and consensus-building.

The combined pattern across these dimensions highlights Europe's internal diversity: high individualism and low power distance in the North and West contrast with higher hierarchy and uncertainty avoidance in the South and East. China's unique configuration – high power distance and low uncertainty avoidance¹ – sets it apart from all European regions. This asymmetry has direct implications for joint venture cooperation: Chinese partners may rely on top-down decision structures yet remain flexible in implementation, while European teams from high-uncertainty avoidance contexts, such as Central or Southern Europe, may expect detailed planning and procedural clarity. These structural contrasts require deliberate intercultural management to transform difference into complementarity rather than conflict. Consequently, the data in Table 1 provide an essential empirical foundation for

¹ As noted by Komarova et al. (2021), power distance and uncertainty avoidance typically correlate positively, with hierarchical societies tending to prefer stability and clear rules. China, however, represents a structural paradox within Hofstede's model: despite a high power distance score (80), it maintains low uncertainty avoidance (30). Rooted in Confucian relationalism, Chinese hierarchy functions as a moral and relational order rather than a rigid bureaucracy, allowing obedience to authority to coexist with flexibility and tolerance for ambiguity. In practice, this produces "hierarchy without rigidity and flexibility without disorder," as managers rely on contextual judgment and relational harmony (*guanxi*) instead of strict procedural control.

understanding how varying cultural logics shape adaptation processes and the formation of the “Third Culture” within Chinese–European multinational project teams.

The comparative results align with findings from the “Mapping the EU–China Cultural and Creative Landscape” (European Commission et al. 2015), which emphasized Europe’s internal cultural heterogeneity as a crucial determinant of cooperation outcomes. The study underscored that Western and Northern Europe exhibit strong traditions of cultural openness, innovation, and horizontal coordination, whereas Central, Eastern, and Southern regions maintain more hierarchical and stability-oriented administrative styles. These tendencies correspond closely to the quantitative variation in Hofstede’s indicators – especially power distance and uncertainty avoidance – suggesting that structural diversity within Europe itself shapes how different partners approach collaboration with China.

Furthermore, the Mapping study (European Commission et al. 2015) identified a growing convergence between European and Chinese actors in the creative and organizational domains, despite contrasting cultural logics. While European institutions tend to rely on regulatory frameworks and transparent governance, Chinese partners often emphasize relationship-based coordination, flexibility, and rapid adaptation. These patterns mirror the high power distance yet low uncertainty avoidance observed in China’s scores, indicating that cooperation frequently succeeds when European partners adjust toward more process-oriented pragmatism rather than strict procedural control.

Finally, the Mapping report (European Commission et al. 2015) highlighted that successful EU – China projects tend to emerge in sectors where intercultural complementarity outweighs value conflict – namely in design, digital industries, and education. This finding resonates with the quantitative contrasts in Table 1: countries scoring high on individualism and low on uncertainty avoidance (e.g., the Netherlands, Sweden) share with China a preference for innovation and adaptable partnership models. Conversely, actors from high-uncertainty and collectivist contexts (e.g., Croatia, Hungary) may experience greater friction unless supported by deliberate intercultural management structures. Thus, the combined data reveal that both regional European variation and China’s distinctive cultural configuration directly influence the practical dynamics of multinational collaboration.

Conclusions

The findings of this mixed-methods study demonstrate that the formation of the “Third Culture” in Chinese–European multinational project teams is a multidimensional and adaptive process combining both structural and relational mechanisms. The qualitative evidence from ethnographic and organizational case studies confirms that successful cultural adaptation emerges not through assimilation or dominance of one side, but through continuous negotiation of shared meanings, communicative patterns, and working norms. Mutual accommodation, reflexivity, and trust allow participants to balance hierarchical traditions with egalitarian dialogue, creating hybrid practices that sustain cooperation and innovation.

The quantitative comparison, supported by Hofstede’s cultural dimensions and the Mapping study, highlights how systemic value differences – particularly in power distance, uncertainty avoidance, and individualism – shape these adaptive outcomes. China’s configuration of high power distance and low uncertainty avoidance contrasts with Europe’s internal diversity, where Northern and Western countries favor equality and flexibility, and Central, Eastern, and Southern regions prioritize hierarchy and procedural stability. These variations explain both the friction and the complementarity observed in joint projects:

European partners often seek predictability and rule-based coordination, while Chinese counterparts emphasize relational harmony and pragmatic adaptation.

Taken together, the study reveals that the “Third Culture” functions as a dynamic equilibrium, integrating contrasting orientations into a shared intercultural logic that supports effective collaboration. For practitioners, this implies that intercultural management should focus not on eliminating differences but on structuring dialogue and learning processes that transform them into sources of synergy. By aligning hierarchical respect with openness to experimentation, Sino-European teams can convert cultural asymmetries into strategic advantages, enhancing trust, creativity, and long-term project performance.

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Veidojot “Trešo kultūru”: kultūras adaptācijas stratēģiju izpēte Ķīnas un Eiropas daudzvalstu projektu komandām

Kopsavilkums

“Trešās kultūras” jēdziens sniedz vērtīgu ietvaru tam, kā saprast kultūras adaptācijas procesus, kas notiek starptautiskā vidē starp Ķīnas un Eiropas daudzvalstu projektu komandām. Sākotnēji šo terminu 20. gadsimta 60. gados ieviesa Džons un Ruta Jusīmi (John un Ruth Useem), pētot bērnus, kas uzauguši starp divām kultūrām. Tas raksturo kopīgas hibrīdas kultūras veidošanos, kas rodas, kad cilvēki no atšķirīgām kultūras vidēm ilgstoši sadarbojas. Kopīgo Ķīnas–Eiropas projektu kontekstā “Trešā kultūra” nozīmē vienotu, savstarpēji saskaņotu normu, vērtību un uzvedības modeļu kopumu, kas pārsniedz dalībnieku sākotnējos kultūras rāmjus. Tā neparedz, ka viena puse pielāgojas otras praksei; drīzāk komandas locekļi kopīgi veido jaunu kultūras telpu, kas integrē abu pušu elementus – piemēram, apvienojot hierarhijas cieņu, kas raksturīga ķīniešu organizāciju kultūrai, ar līdzdalības un atklātas komunikācijas stilu, kas bieži sastopams Eiropas darba vidē. Šāds process veicina savstarpēju sapratni, mazina konfliktus un uzlabo koordināciju, izveidojot funkcionālu kultūru, kas pielāgota kopējiem komandas mērķiem.

“Trešā kultūra” ir dinamiska, nevis statiska parādība – tā attīstās caur nepārtrauktu mijiedarbību, refleksiju un pielāgošanos, kad dalībnieki mācās viens no otra un pilnveido savas kopīgās darba prakses. Šajā pētījumā izmantota jauktā metodoloģija, apvienojot

kvalitatīvas un kvantitatīvas tiek integrēts Hofstede kultūras dimensiju ietvars, lai kartētu galvenās vērtību atšķirības un adaptācijas mehānismus, kam seko kvantitatīva sekundāro datu analīze un iepriekšējo pētījumu par starpkultūru sadarbību starp Ķīnas un Eiropas valstu pārstāvjiem salīdzinoša analīze. Kopumā šī pieeja sniedz visaptverošu pieeju, lai analizētu, kā veidojas un tiek uzturētas “Trešās kultūras” daudzvalstu vidēs. Pētījumā skatījumu uz to, kā hibrīdas kultūras identitātes veidojas, stabilizējas un ietekmē projektu rezultātus, piedāvājot praktiskas atziņas vadītājiem, kas vēlas veicināt efektīvu starpkultūru sadarbību daudzvalstu organizācijās.

Atslēgas vārdi: “Trešā kultūra”, Hofstede kultūras dimensijas, kultūras adaptācija, Ķīnas–Eiropas daudzvalstu komandas.

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Rakstiem krājumos:

Turner R. H. (1990) "A Comparative Content Analysis of Biographies." In: Øyen, E., ed. *Comparative Methodology: Theory and Practice in International Social Research*. London, etc.: Sage Publications. pp. 134–150.

Rakstiem žurnālos:

Bela B. (1997) Identitātes daudzvalsība Zviedrijas latviešu dzīvesstāstos. *Latvijas Zinātņu Akadēmijas Vēstis, A, 51*, Nr. 5/6, 112.-129. Lpp. (In Latvian)

Rakstiem laikrakstos:

Strazdins I. (1999) Matemātiķi pasaulē un Latvijā. *Zinātnes Vēstnesis*, 8. marts. (In Latvian)

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