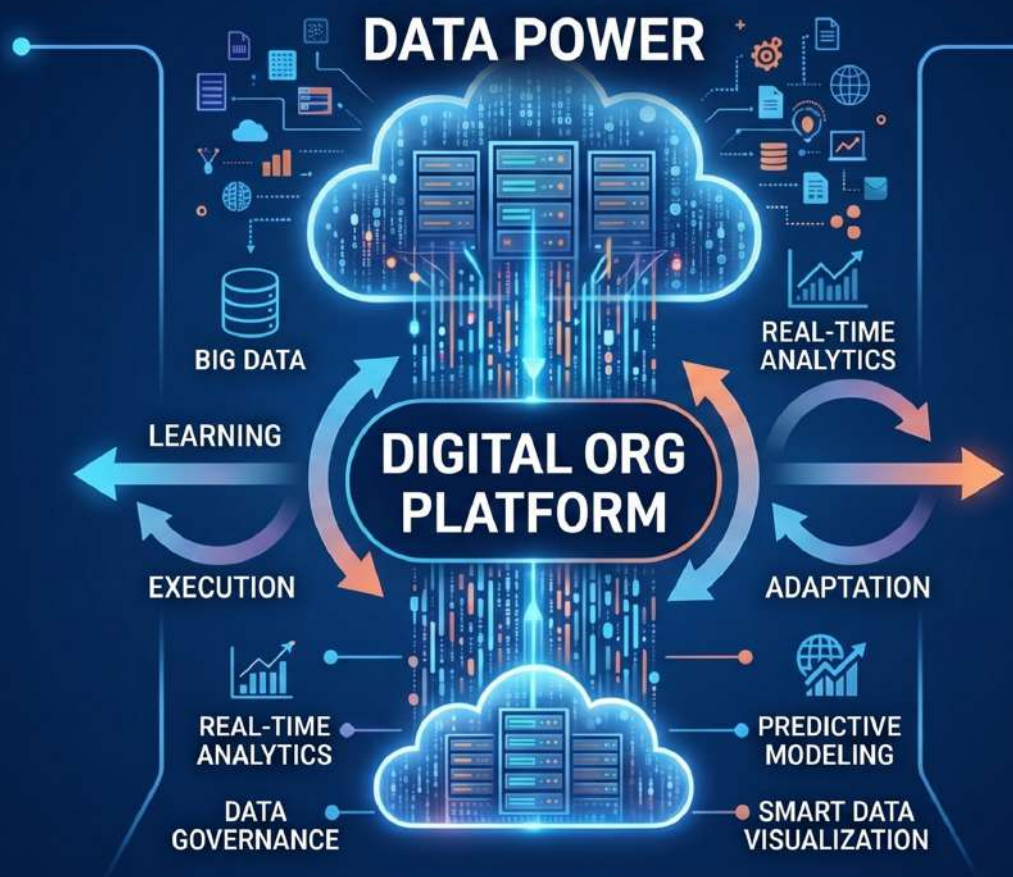
The Digital Organization Reimagined: Artificial Intelligence, Data and the New Logic of Management

Workshop assignments of Students specializing in Controlling in the Accounting and Controlling Program at Krakow University of Economics



Edited by
Janusz Nesterak
Anna Kołodko

KRAKOWSKA SZKOŁA CONTROLLINGU

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INTRODUCTION

The monograph presented to the readers brings together 65 posters prepared by students of the Controlling specialization within the Accounting and Controlling programme at the Krakow University of Economics. The works have been divided into five thematic parts, which makes it possible to organize their content and present various areas of contemporary management. Taken together, they create a coherent picture of an organization operating under conditions of rapid digital transformation. The collection of posters shows how young authors perceive the changes taking place in enterprises and what significance they attribute to technologies, data and competencies in the modern work environment.

The posters should not be treated as a set of separate technological topics. They form a multidimensional narrative about contemporary management, in which digital technologies and artificial intelligence influence the way organizations operate from the technological environment, through data and management controlling supporting decision-making, to work models, information security and the responsible creation of value.

From the perspective of the young authors, it is clearly visible that digitalization has ceased to be an abstract vision of the future and has become part of the everyday reality of enterprises, institutions, employees, consumers and managers. Their works present an image of an organization that is changing under the influence of new tools, such as artificial intelligence, chatbots, Business Intelligence, dashboards, process automation and biometrics. At the same time, the consequences of these changes are also visible: new professional roles, new risks, new competencies and growing expectations regarding organizational responsibility.

The monograph guides the reader through the world of technology, data, decision-making processes and the human dimension of the contemporary digital organization. It presents a work environment in which technology is no longer merely a tool, but an element that influences the way tasks are organized, decisions are made, risks are identified and trust is built. This is trust based on data which, if properly structured and interpreted, can create value for the organization.

Such a structure makes it possible to view the posters not as a collection of individual presentations, but as a shared diagnosis of what the contemporary digital organization means to the young generation.

Part I. The Digital Organization in the Era of Artificial Intelligence

The first part of the monograph includes posters in which the students attempt to capture the broad significance of artificial intelligence for contemporary organizations and everyday life. AI appears here not only as an IT tool, but as a new layer in the functioning of the social and economic world. It supports communication, learning, planning, translation, shopping, travel, information analysis and, increasingly, also business, educational and decision-making processes.

The perspective of the young authors, resulting from their knowledge, experiences, observations and intuition, makes it possible to see that AI is no longer a technology of the future, but a real tool of everyday activity. The posters present ChatGPT as an assistant in work, learning and time organization; machine learning as a way in which systems learn from data; and automation as a phenomenon changing the functioning of enterprises. At the same time, the students emphasize that the use of AI requires critical thinking, responsibility and awareness of the limitations of technology.

This part also clearly reveals an intuitive understanding that AI does not replace a single tool, but changes the way people search for information, solve problems and organize activities. Therefore, the first part serves as an opening section and presents the environment of change from which the subsequent issues arise.

Part II. From Data to Decisions: Controlling, BI and Digital Finance

The second part of the monograph constitutes its substantive core. It focuses on the controlling and financial area of the programme: BI, dashboards, digital finance, RPA, KPIs, data storytelling, treasury, credit risk, autonomous finance and the changing role of the controller.

Students perceive data as one of the most important resources of the contemporary organization, while at the same time emphasizing that data alone do not create value. Value emerges only when data are structured, interpreted and used in the decision-making process.

Business Intelligence is presented here as a mechanism for transforming dispersed information into reports, dashboards, visualizations and analyses that support management. Managerial dashboards appear as tools for the rapid monitoring of performance, while data storytelling is shown as a way of giving numbers meaning and decision-making relevance.

In the students' works, controlling ceases to be a function focused on reporting the past. The controller becomes an analyst, a business partner, an interpreter of data and an advisor to management. AI, RPA and BI systems take over some routine tasks, but they do not eliminate the need for human interpretation. On the contrary, they increase the importance of analytical, communication and strategic competencies.

This part clearly shows the transition from reactive controlling to predictive and advisory controlling. Posters on predictive analytics, autonomous finance and AI-driven analytics indicate that the future of finance will be increasingly connected with forecasting, scenario modelling, risk analysis and rapid responses to change.

Students also do not overlook the challenges: data quality, incorrect interpretation of dashboards, implementation costs, employee competencies, information security and the risk of excessive trust in algorithms. As a result, digital controlling emerges as an area that requires both appropriate tools and responsible management.

Part III. People and the Future of Work in the Digital Organization

In the third part of the monograph, attention shifts from technology to people and the changing nature of work. Students show that digital transformation changes not only systems and processes, but also the way work is performed, relationships within the organization, expectations towards leaders and the understanding of employee well-being.

This part includes posters devoted to remote and hybrid work, digital nomads, the four-day working week, the impact of automation on well-being, future competencies, leadership in the age of AI, upskilling, reskilling and the relationship between technology and people in the workplace.

Remote and hybrid work, consolidated after the pandemic, are presented both as sources of flexibility and autonomy and as areas of risk: social isolation, communication difficulties, digital overload and the blurring of boundaries between work and private life. Hence, topics such as the "always-on culture", the right to disconnect, digital ergonomics, loneliness in remote work, declining motivation and the importance of good leadership naturally emerge.

An important theme is the impact of AI and automation on the sense of job security. Technology can relieve employees of routine tasks, support productivity and improve working conditions, but it can also generate technostress, fear of replacement and the need for continuous learning of new tools.

In the works on leadership in the age of AI, a picture emerges of a leader who combines technological competencies with ethical, communicative and organizational reflection. The leader of the future should not simply rely on algorithmic recommendations, but should understand their limitations, build trust and support the team in an environment of continuous change.

Part IV. Data Security and Digital Trust in the Age of AI

The fourth part of the monograph concerns an area that is becoming increasingly important: cybersecurity, identity protection, the resilience of financial processes and trust in information.

This part includes posters on the cybersecurity of financial data, deepfakes, AI security, biometrics, biometric payments, financial fraud and the protection of AI systems against manipulation.

Students show that technology which supports an organization may, at the same time, become a tool for abuse. This is particularly evident in the works on deepfakes, which describe the risk of impersonating managers, manipulating voice or image, and influencing financial decisions.

The posters devoted to the security of financial data present a broad spectrum of threats: phishing, ransomware, data leaks, human errors, unauthorized access, weak passwords, internal threats and attacks on the supply chain. Financial data are presented

as one of the most valuable resources of an organization, and their loss may result in technical, financial, legal and reputational consequences.

Biometrics is also an important theme. Students recognize both the convenience and speed of new authentication methods and their limitations: biometric data cannot be "reset" like a password. This highlights the specific nature of the risk associated with biological data.

In the works on AI security, a distinction emerges between protecting artificial intelligence itself and using AI to protect the organization. AI may be both a source of risk and a tool for reducing it.

Part V. Responsible Technology and Sustainable Organizational Value

The fifth part of the monograph shifts attention from technology to the question of its purpose, responsibility and long-term value. Students emphasize that digital transformation cannot be assessed solely through the lens of efficiency. It must also take into account its impact on the environment, society, energy and sustainable development.

This part includes posters devoted to sustainability controlling, ESG, renewable energy sources, energy management, the environmental impact of AI, smart home solutions and energy efficiency. The authors indicate that controlling and management increasingly encompass not only financial data, but also non-financial data: emissions, energy consumption, environmental costs, resource efficiency, the quality of ESG data and resilience to regulatory risks.

The issue of responsible artificial intelligence is particularly significant. AI can support environmental protection by analysing climate data, monitoring emissions and optimizing energy consumption. At the same time, AI itself requires substantial resources: energy, water, server infrastructure and critical minerals. Thus, an important tension appears in the posters: AI can support sustainable development, but it must itself be designed and used responsibly.

Students intuitively connect sustainable development with controlling. Sustainability controlling is presented as an extension of traditional controlling to include environmental, social and governance factors. This shows that the future of controlling will require the integration of financial and non-financial data and the support of decisions that build the long-term resilience of the organization.

Summary

The proposed division of the posters into five parts makes it possible to organize the achievements of the students around the key challenges of contemporary management. The posters prepared by the young generation entering the labour market in 2026 present the digital organization as a system of interconnected vessels: technology creates new opportunities, data support decisions, controlling gives them structure, people remain the key interpreters, security builds trust, and responsibility determines lasting value.

The monograph is therefore not only a documentation of the posters, but also a picture of the way in which the young generation understands the future of organizations: in a practical, multidimensional and reflective manner. This perspective combines fascination with technology with questions about people, risk, ethics, the environment and the purpose of management in a world in which, as the well-known maxim often attributed to Peter Drucker suggests, "the best way to predict the future is to create it."

dr hab. **Janusz Nesterak** , prof. UEK
mgr **Anna Kołodko**

Krakow-Świdnica, June 2026

PART I

The Digital Organization in the Era of Artificial Intelligence

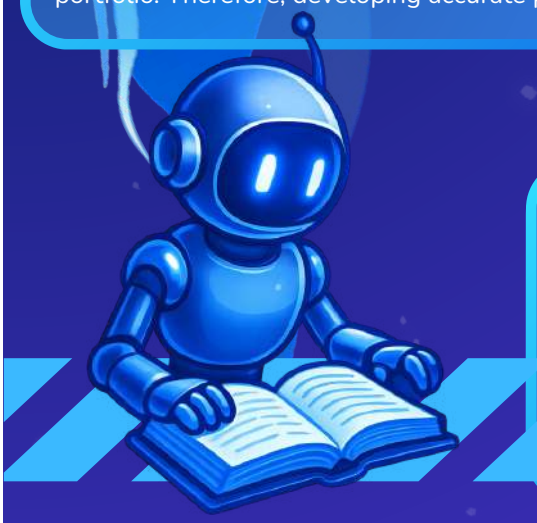
AI in Credit Risk Management

Martyna Dyczka
Emilia Młynarska

KRAKOW UNIVERSITY OF ECONOMICS

What Is Credit Risk?

Credit risk refers to the possibility that a borrower will fail to repay a loan on time or in full. It is one of the most significant risks faced by banks and financial institutions. The assessment of credit risk is based on analyzing a customer's financial situation, credit history, and payment behavior. Incorrect evaluation may lead to financial losses and deterioration of the credit portfolio. Therefore, developing accurate prediction methods is essential.



How AI Supports Credit Assessment

AI systems analyze customer data automatically and in real time. They use information such as repayment history, income level, financial activity, and behavioral data. Machine learning models learn from past cases and continuously improve their performance. This enables faster identification of high-risk borrowers. The decision-making process becomes more dynamic and data-driven.

Benefits of Using AI

The use of AI increases the accuracy of creditworthiness assessment. Process automation reduces decision-making time and operational costs. Algorithms also help detect financial fraud more effectively. Financial institutions can better manage credit portfolios and reduce default rates. Customers benefit from faster and more personalized financial offers.

Challenges and Limitations

Despite its advantages, AI implementation also involves certain risks. Models may replicate biases present in training data, which can lead to discrimination. Another challenge is the limited transparency of some algorithms, often referred to as the "black box" problem. Data privacy and regulatory compliance are also critical concerns. For this reason, human oversight remains essential.

The Future of AI in Credit Risk Management

The development of AI is transforming credit risk management from a reactive to a predictive approach. Banks can identify potential financial difficulties earlier and take preventive actions. Integration of AI with real-time data analysis improves financial system stability. In the future, models are expected to become more transparent and accurate. AI will likely become a standard tool supporting credit decisions.

"Automatyzacja oceny zdolności kredytowej z wykorzystaniem AI – wyzwania prawne i praktyczne" - Katarzyna Alicja Urbańska Kortowski Przegląd Prawniczy 2025
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KRAKOW UNIVERSITY OF ECONOMICS

Bartosz Borysewicz

Piotr Mularczyk

AI in Internal Audit

The objective of this poster is to present the main benefits of using Artificial Intelligence in Internal Audit. It highlights how AI can improve audit efficiency, accuracy, and risk detection. The poster also discusses potential risks and challenges associated with the use of AI in internal audit processes.

Benefits of Using AI in Internal Audit and Control Testing

The integration of Artificial Intelligence in Internal Audit improves efficiency, accuracy, and transparency of audit processes. AI helps organizations strengthen internal controls while enabling auditors to focus on strategic analysis instead of repetitive tasks.

1. Greater Speed and Audit Coverage

AI analyzes entire datasets rather than small samples, enabling faster audits and broader control coverage.

2. Higher Accuracy and Reliability

Automated analytics reduce human errors and improve the quality and reliability of audit results.

3. Better Risk Visibility

Advanced algorithms identify trends, anomalies, and hidden risks that may be difficult to detect through manual testing.

4. Reduced Manual Workload

Automation eliminates repetitive tasks such as data extraction, control testing, and report preparation, allowing auditors to focus on higher-value insights.

Balance between technology and judgement

- AI does not replace the auditor, it empowers them.
- Professional judgment remains essential to challenge and validate AI outputs.
- Success requires robust data security, ethical AI frameworks, and clear accountability.
- Clear objectives — defining why and how AI should be implemented to ensure a strong return on investment (ROI).

Challenges and Risks of AI

- Data privacy and cybersecurity risks due to increased data access.
- Regulatory and liability concerns related to AI-generated conclusions Integration difficulties with existing audit systems and processes.
- High initial implementation costs and the need for specialized skills.

WHY INTEGRATE AI? Artificial Intelligence enables internal auditors to move beyond traditional sampling by analyzing entire data populations. It helps detect hidden patterns and potential risks while automating time-consuming tasks such as documentation and routine control checks. In addition, Natural Language Processing (NLP) allows the analysis of unstructured data, including contracts, emails, and meeting transcripts. As a result, AI accelerates report preparation and provides faster, data-driven insights for management.

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THE CRACOW TIMES

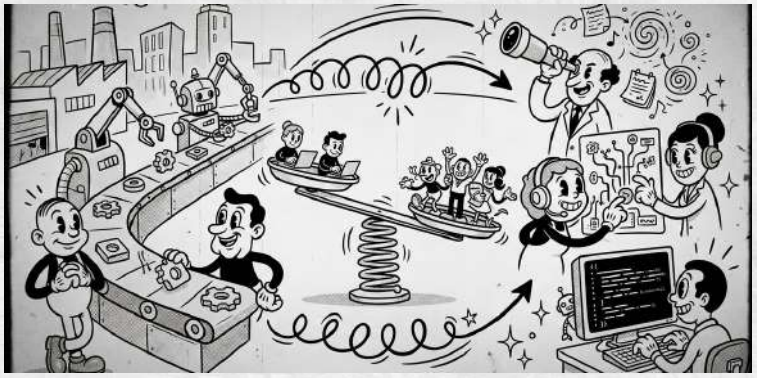
TOMASZ BALON
MICHAŁ MIZERA
KACPER TYBOROWICZ

AI IN THE WORKFORCE: EVOLUTION OR ELIMINATION?

BEYOND HUMAN LABOR: UNDERSTANDING THE AI REVOLUTION

Automation and artificial intelligence (AI) are reshaping the modern workplace. This "awakening" goes beyond robots – it's a shift in value creation across sectors like manufacturing, services, and creative industries. AI promises 12% annual productivity gains and trillions in global GDP growth yet ignites fears of mass unemployment. This poster asks: collaborative evolution or job elimination?

AI automation uses machine learning – systems that adapt, learn from data, and act autonomously. Powered by neural networks and big data, they detect invisible patterns. Unlike rigid software, AI anticipates issues in logistics or production, tackling "human-only" tasks like image recognition or natural language processing.

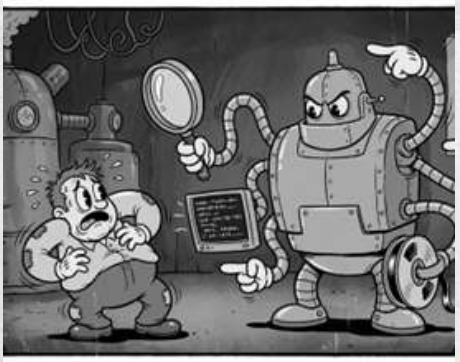


HUMAN EDGE: WHY MACHINES NEED US

AI stumbles on context, creativity, and empathy. It can't grasp sarcasm, improvise in crises, or build trust. While algorithms process logic, they lack the moral compass and emotional intelligence essential for complex leadership. Humans shine in non-linear thinking, ethical decisions, and social dynamics. Future: Human-AI symbiosis – machines crunch data/routines; we strategize, innovate, empathize. This partnership transforms the workplace from a site of competition into one of shared potential.

EVOLUTION THROUGH NUMBERS

Research shows nuance: 15% of global jobs at risk by 2030, but economic boom could boost demand by 33%. Historically, industrial robots displaced 2 workers but spawned >2 new roles in services/tech. AI targets routine tasks (data entry, assembly), freeing humans for complex work – a market reshaping, not collapse. Example: Coders now oversee AI-generated code.



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March 8, 2026

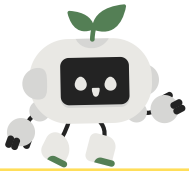
AI-POWERED CONTROLLING: FROM DATA CRUNCHING TO A STRATEGIC PARTNERSHIP

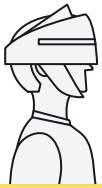
Bartłomiej Czajka, Daniel Kucharzyk, Michał Jakubowski

KRAKOW UNIVERSITY OF ECONOMICS

Wiktor Brzózka
Kinga Kudroń

ARTIFICIAL INTELLIGENCE AS AN "ECO-CO-WORKER" IN CONTROLLING





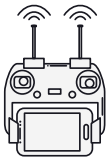
Modern companies operate under increasing pressure to improve efficiency and environmental responsibility. Controlling plays a key role in data analysis and decision support, while the development of AI enables further transformation toward more advanced and automated processes.

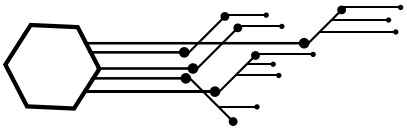
The aim of this poster is to present the role of artificial intelligence in controlling as a tool supporting sustainable development.
The focus is on optimizing resource usage, automating processes, and improving decision-making quality

AI systems act as digital partners for controllers.
By analyzing large datasets in real time, AI:

- identifies inefficiencies,
- supports decision-making,

operates partially autonomously (agent-based systems).





AI is used in controlling for:

- energy consumption and CO_2 emission analysis,
- forecasting environmental costs,
- automated ESG reporting,
- supporting investment decisions.

This enables integration of financial and non-financial data.

Implementing AI in controlling provides:

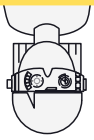
- cost reduction,
- resource optimization,
- more accurate decision-making,
- improved environmental performance.

AI supports building a competitive advantage

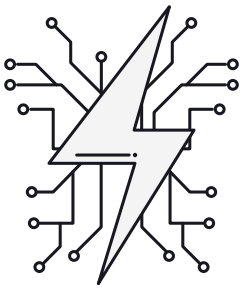
Despite its advantages, AI implementation involves challenges:

- high energy consumption,
- need for system integration,
- data quality requirements,
- risk of over-automation.

Development should focus on energy-efficient solutions ("lean AI").



Artificial intelligence significantly changes the role of the controller – from data analyst to strategic business partner.
In the future, controlling will play a key role in managing sustainability using advanced analytics and autonomous systems



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Aleksandra Daniel
Mateusz Skóra
Katarzyna Wojdan

BUSINESS INTELLIGENCE AS THE BRAIN OF MODERN CONTROLLING

OBJECTIVE OF THE POSTER

The objective of this poster is to present how Business Intelligence improves data analysis and supports effective decision-making in modern controlling.

PROBLEM

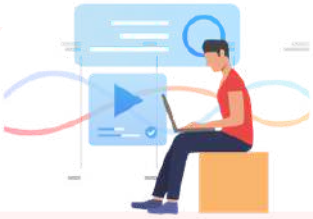
Modern companies generate large amounts of data that are often fragmented and difficult to analyze. Traditional controlling relies on manual reporting and delayed information. As a result, decision-making is slow and mostly reactive.

SOLUTION: BUSINESS INTELLIGENCE

Business Intelligence integrates data from multiple sources into one consistent system. It enables real-time access to information and automates reporting processes. Interactive dashboards make data easier to understand and analyze.

TECHNOLOGIES & TOOLS

Popular BI tools include Microsoft Power BI, Tableau, and Qlik Sense. These tools use cloud computing and advanced analytics to process large datasets efficiently.



IMPACT ON ENTERPRISE MANAGEMENT

Business Intelligence enables faster and more accurate decision-making. It improves cost control and increases transparency within the organization. It also helps identify risks and monitor performance more effectively.

INNOVATION ASPECT

Modern BI systems use artificial intelligence and predictive analytics. They allow users to create their own reports through self-service solutions. This increases flexibility and supports a data-driven approach.

FUTURE OF CONTROLLING

The role of the controller is evolving from a report creator to a data analyst and business partner. Controllers increasingly support strategic decisions using advanced data analysis.

CONCLUSION

Business Intelligence transforms controlling into a strategic and data-driven function. It plays a key role in improving the effectiveness of modern enterprise management.

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Alina Bajek
Julia Bajorek
Zuzanna Morawska

Chatbots & Generative AI in Customer Service

AI-BASED CHATBOTS

- Improved response quality
- More natural conversation

GENERATIVE AI

- Advanced models (e.g ChatGPT)
- Process automation

Personalized Interactions

- 24/7 Support
  Chatbots and AI ensure round-the-clock service, offering immediate assistance at any time.
- Understanding Preferences
  Generative AI can personalize reponses based on customer history and preferences, delivering a tailored customer experience.

Fast & Efficient Help

- Complex Conversations
  From addressing simple FAQs to engaging in complex, contextual discussions, AI can handle a wide range of inquiries.
- Automated Solutions
  Automating routine tasks and answering customer queries quickly improves efficiency and reduces response times.

What Do Studies Show?

Research indicates that over 80% of customers prefer interacting with intelligent chatbots due to their ability to provide quick, accurate, and relevant answers. Businesses see increased customer satisfaction, engagement, and reduced response times leading to improved operational efficiency.

The Future Of Customer Service

- Innovative Solutions & Automation
  Generative AI is driving innovation in customer service, automating processes.
- AI Assisting Human Agents
- Expanding AI Capabilities

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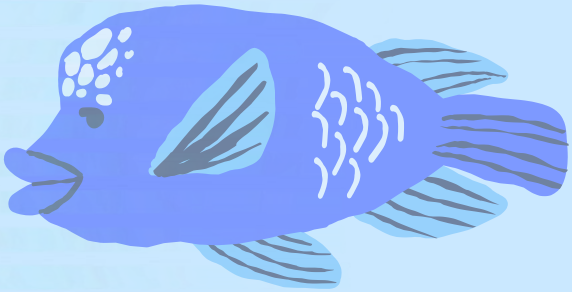
Deepfake: Don't Get Hooked by the Web of Lies

Wojciech Gajos
Ewelina Kozina
Natalia Otręba

DEEPFAKE IS AN AI-DRIVEN TECHNOLOGY USED TO CREATE ***REALISTIC BUT FABRICATED*** IMAGES, AUDIO, AND VIDEO. IT LEVERAGES ***DEEP LEARNING ALGORITHMS*** TO SWAP FACES, CLONE VOICES, OR MANIPULATE EXPRESSIONS WITH STARTLING ACCURACY.



The Deep Data:

900% - the number of detected deepfake cases online skyrocketed by over 900% in just one year (2023 vs 2022).

73% - humans can correctly identify AI-generated speech only 73% of the time. Without training, it's nearly a coin flip.

$25,000,000 - a multinational firm in Hong Kong lost $25M after an employee attended a video call where every other participant was a deepfake.

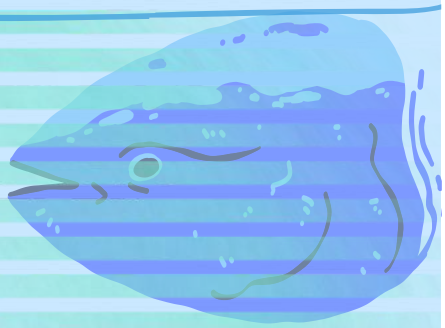
Anatomy of a Lie - How to Spot One?

UNNATURAL BLINKING - eyes that don't move naturally or fail to blink.

LIGHTING MISMATCH - shadows on the face that don't align with the environment.

METALLIC AUDIO - a robotic "reverb" in the voice and a lack of natural breathing pauses.

"FLOATING" EDGES - blurritness or glitching where the hair meets the forehead.



The Threat - Why It Matters

The impact of deepfakes spans from widespread **Election Manipulation** designed to sway public opinion, to high-tech **Financial Scams** that target businesses and individuals with convincing **Voice Phishing** (Vishing) attacks. Furthermore, the technology enables the illegal and harmful generation of **Non-Consensual Imagery** (Deepnudes), severely violating personal privacy.

Survival Guide - Security Rules

!!! *Verify the Source* - is the information coming from an official, verified profile?

!!! *Trust, but Verify* - if a video seems too sensational to be true, it probably is. Use cross-checking.

!!! *Safe Word Strategy* - establish a "safe word" with your family to verify identities during suspicious calls.

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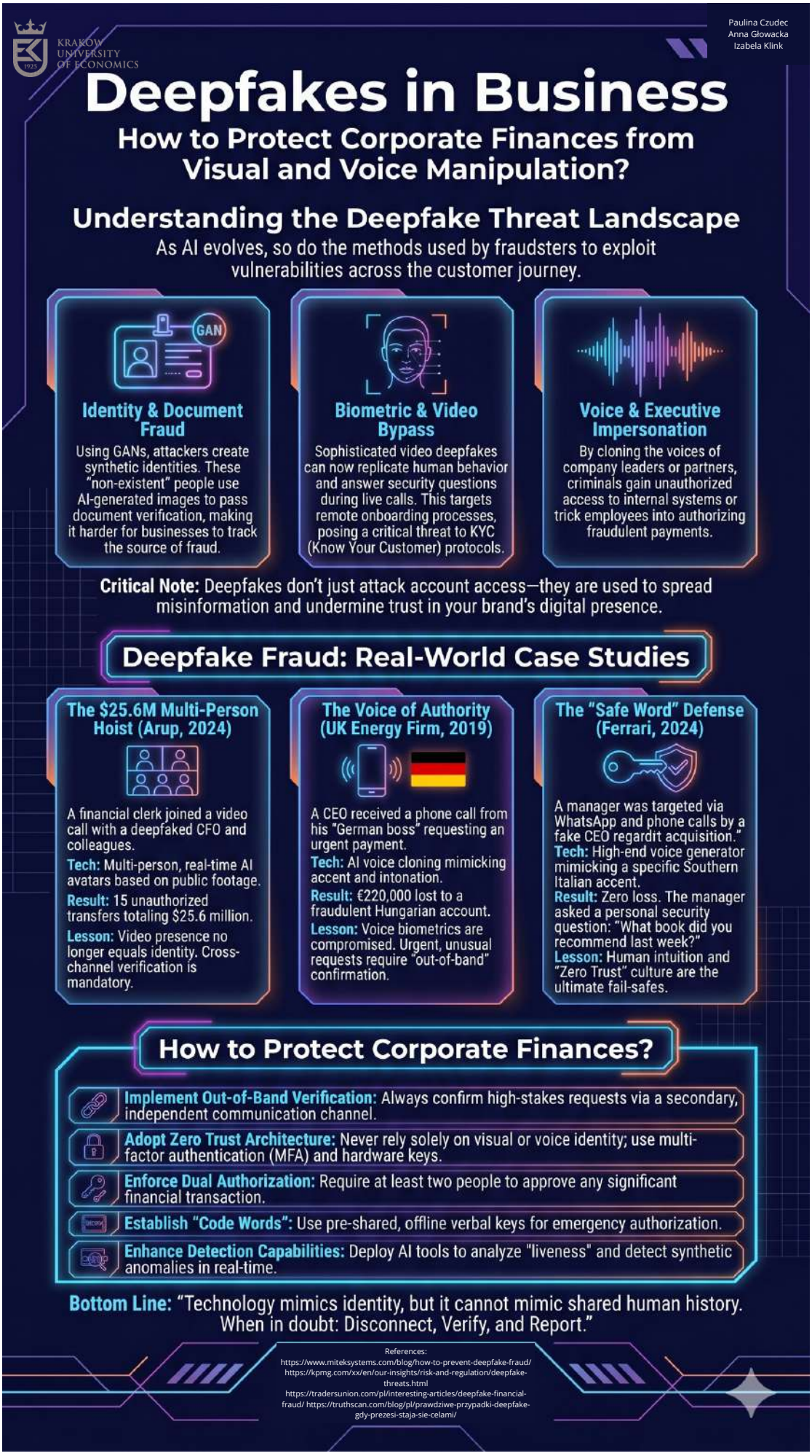

DEEPFAKES IN BUSINESS: HOW TO PROTECT CORPORATE FINANCES FROM VISUAL AND VOICE MANIPULATION?

Paulina Czudec, Anna Głowacka, Izabela Klink

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Joanna Braś
Katarzyna Krupa

E-INVOICING IN POLAND - KSeF

What is KSeF?

KSeF is Poland's central national electronic platform created by the Ministry of Finance to issue, receive, store and manage structured e-invoices. It replaces traditional paper and PDF invoicing by requiring a standard XML format.

What changes?

- ✓ All invoices must be issued and received only via KSeF in structured XML format.
- ✓ Invoices get a unique identification number on the platform.
- ✓ Paper or unstructured PDF invoices are no longer compliant outside KSeF.

Non-Compliance Risks

From 2027, issuing invoices outside the system may lead to penalties, rejected invoices, and blocked VAT deductions.

Key Implementation Dates

- ✓ Voluntary use since Jan 1, 2022
- Mandatory for Large Taxpayers **Feb 1, 2026**
- Mandatory for Most VAT Payers **Apr 1, 2026**
- Mandatory for Micro-Entities **Jan 1, 2027**

Benefits of KSeF

- Real-time issuance and validation of e-invoices.
- Central storage accessible to both parties and tax authorities.
- Better data security and reduced errors.
- Potential for faster VAT refund processes.

Who must use it?

- ✓ All VAT-Registered Business in Poland (B2B, B2G, and B2C)
- ✓ Foreign Companies Operating Under Polish VAT

System Purpose

Standardize invoice exchange, centralize data, and increase transparency and compliance in the Polish tax system.

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NETTING, CASH POOLING, VIRTUAL ACCOUNT MANAGEMENT

Dominika Florek
Paulina Kasprzyk
Łukasz Kmiecik

WHY IT MATTERS NOW

- Higher rates make idle cash costly.
- FX volatility and fragmented banking reduce liquidity control.
- Global groups need immediate visibility into where cash sits.
- For controllers, these tools improve forecasting, discipline and cash coordination.

Less manual cash chasing.

NETTING IN PRACTICE

Netting replaces many intercompany payments with one net settlement per entity. It reduces bank fees, FX spreads and reconciliation noise while making internal positions easier to compare and report.

Gross flows → net position

CASH POOLING MODELS

ZERO BALANCING
Physical transfer to a master account.

NOTIONAL POOLING
No transfer - interest is calculated on a combined basis.

VAM
One real account with many virtual IBANs.

ONE ACCOUNT MANY VIRTUAL VIEWS

VAM IN PRACTICE

VAM keeps reporting detail while reducing the need to maintain many physical bank accounts. It is useful when a group wants one treasury structure without losing visibility by entity.

- Lower administrative cost.
- Cleaner ERP integration.
- Faster setup for new entities.

A practical answer to account sprawl.

TECHNOLOGY SHIFT

SMART CONTRACTS, CLSNET AND KINEXYS

- Programmable payments support 24/7 liquidity moves.
- Atomic netting shortens settlement cycles.
- Blockchain-based tools point toward real-time treasury.

This supports earlier warning signals and faster cash visibility..

FINAL INSIGHT Netting, cash pooling and VAM are not fading ideas. They are becoming part of a broader digital treasury architecture that improves liquidity control, payment efficiency and managerial decision-making.

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THE FUTURE OF THE CONTROLLER PROFESSION: WILL AI REPLACE?

Dawid Banyś, Daria Boryczko, Oskar Zaremba

Oliwia Belczyńska
Amelia Marks
Julia Moryc

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THE LEARNING ALGORITHM

Master Your Knowledge Growth

1 The Feynman Technique | SIMPLIFY

"If you can't explain it simply, you don't understand it."

Don't just read. Try to explain complex concepts to a child. If you get stuck, go back to the source. Teaching is the best way to find your knowledge gaps.

2 Active Recall | RETRIEVE

"Stop passive reading, start testing."

Close your notes and force your brain to retrieve information from memory. Asking yourself questions builds much stronger neural connections than re-reading the same page 5 times.

3 Spaced Repetition | OPTIMIZE

"Beat the Forgetting Curve."

Review your material at increasing intervals: after 1 day, 3 days, 1 week, and 1 month. This moves information from short-term to long-term memory permanently.

4 Deep Work | FOCUS

Quote: "Quality over quantity."

Focus is the new IQ. 60 minutes of distraction-free study is more effective than 4 hours of multitasking with your phone nearby. Minimize noise, maximize output.

THE LEARNING TOOLKIT

ORGANIZATION & NOTE-TAKING	FLASHCARDS & ACTIVE RECALL	FOCUS & DEEP WORK
Build a structured knowledge base	Test yourself with digital decks	Grow virtual trees by staying off your phone

THE LEARNING ALGORITHM

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WHAT IS MODERN TREASURY?

Treasury is the “financial heart” of a company. While accounting looks at what happened in the past, Treasury focuses on the present and the future. Its main job is to actively manage the company’s money to make sure the business runs smoothly and has the resources to grow. Modern Treasury is built on three main goals: keeping enough cash on hand (Liquidity), protecting the company from market changes (Risk management), and finding the best ways to get new capital (Funding)

The main goal of treasury is to ensure the company always has enough cash to pay its bills. By using Cash Flow Forecasting, the team predicts future income and expenses. To work efficiently, they use Cash Pooling - collecting money from various local accounts into central “master account”. This reduces bank fees and allows the company to invest extra cash in safe, short term assets instead of leaving it idle

Treasury acts as a shield against market changes. It manages FX Risk (currency fluctuations) and Interest Rate Risk by using “hedging” tools (like Forwards or Swaps). This locks in prices and costs, making the company’s profits predictable. Additionally, they monitor Counterparty Risk by checking the safety and ratings of the banks where the company keeps its money

Treasury is the company’s “financial engine” that provides the fuel for growth. The team decides how to raise money - whether through bank loans or by issuing corporate bonds. By maintaining strong Banking Relationships, treasury negotiates better interest rates (lowering the WACC). They also secure backup credit lines to ensure the company is safe even during financial crisis

HOW AI IS CHANGING THE TREASURER’S ROLE?

FORECASTING & PREDICTIVE ANALYTICS

Reliability based on hard mathematics, not intuition. Algorithms learn on historical data, detecting patterns. Hard math instead of wishful thinking

SECURITY & ANOMALY DETECTION

Instant analysis of a thousand transfers per minute. Detecting and blocking anomalies (e.g., unusual transfer times). Key protection against cyberthreats

STRATEGY & ROLE EVOLUTION

AI takes over repetitive tasks. Shift of workload from operations to active risk management and advisory for the board. Evolution towards a strategic partner

Modern Treasury Scheme

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Will Automation Displace Workers or Create New Markets?

The Core Tension: Two Economic Effects To understand the impact of AI and Automation on the labor market, we must distinguish between two forces:

The Displacement Effect (Substitution): AI and robotics replace human labor in routine cognitive and manual tasks, potentially leading to structural unemployment in specific sectors.

The Productivity Effect (Augmentation): Automation lowers production costs, increases real income, and creates demand for entirely new non-routine jobs and services.

The Shift in Labor Demand (Visual Element) Focus on the transition from "Routine" to "Non-Routine" tasks:

Declining: Data entry, basic manufacturing, repetitive administrative roles.

Rising: Strategic BI analysis, AI ethics, human-centric services, and complex problem-solving.

Key Concept: Job Polarization - The "hollowing out" of middle-skill interactive roles.

The Role of Business Intelligence (BI) Business Intelligence acts as the "brain" of the modern enterprise:

Data-Driven Decisions: BI tools transform raw data into macroeconomic insights.

Efficiency Gains: Reducing information asymmetry and optimizing resource allocation.

Market Agility: Allowing firms to pivot quickly, creating more resilient employment structures.

Macroeconomic Indicators to Watch Labor Productivity Growth:

AI as a catalyst for GDP per capita expansion. Capital-Labor

Substitution Ratio: How much capital is being reinvested into automation vs human talent.

Skill Gap Index: The widening mismatch between current education and market needs.

Conclusion: Adaptation over Replacement Automation does not mark the "end of work" but rather the end of routine. The macroeconomic challenge is not the lack of jobs, but the speed of reskilling the workforce to meet the demands of a digitized, AI-driven global market.

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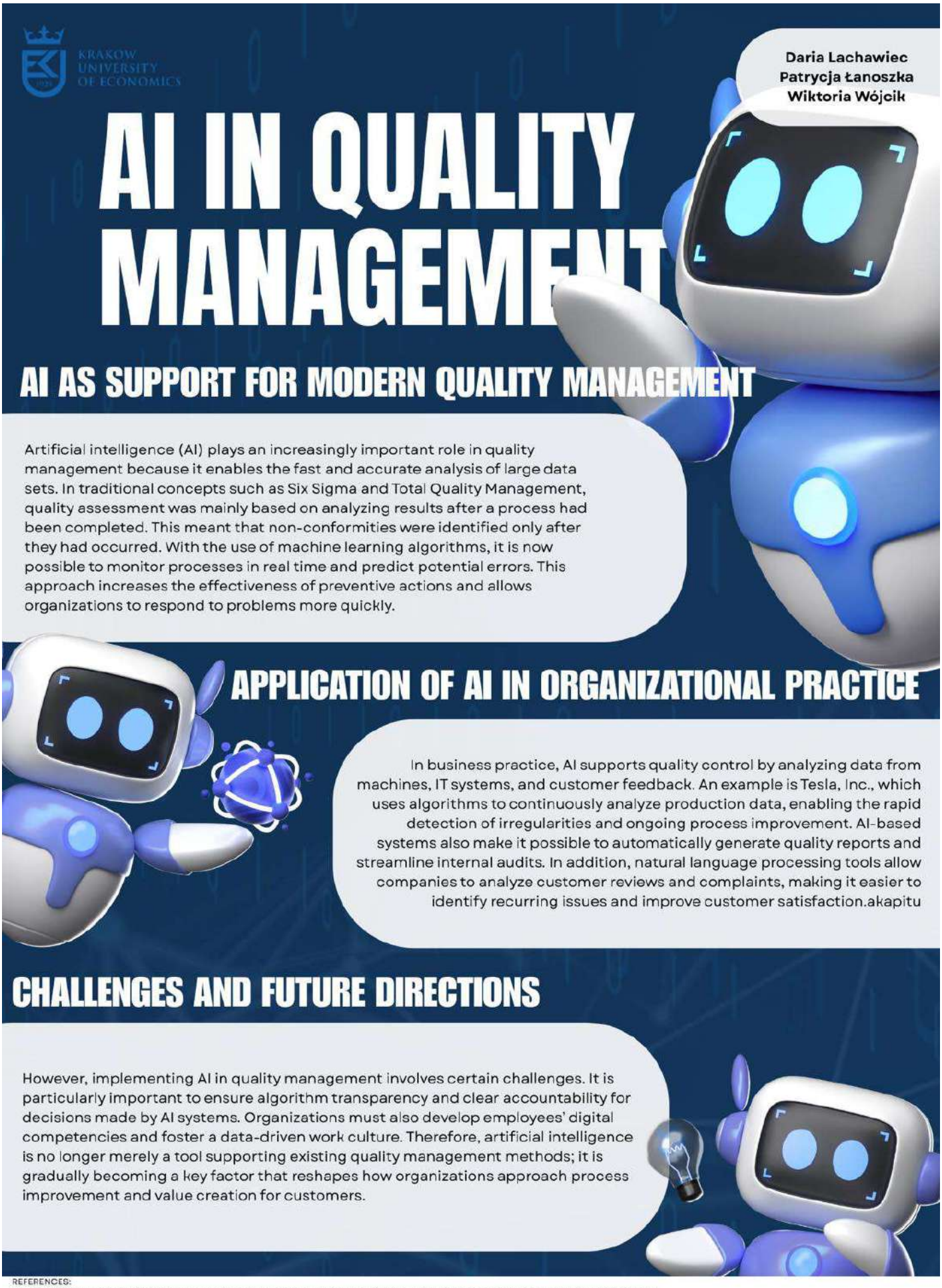
PART II

From Data to Decisions: Controlling, BI and Digital Finance



AI IN QUALITY MANAGEMENT: AI AS SUPPORT FOR MODERN QUALITY MANAGEMENT

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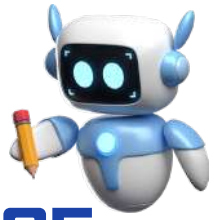
Anna Luberda
Weronika Niewiara



AUTONOMOUS FINANCE – WILL ARTIFICIAL INTELLIGENCE REPLACE THE CONTROLLER?

In recent years, rapid developments in artificial intelligence, automation, and data analytics have significantly transformed financial management. One of the emerging concepts is Autonomous Finance, where intelligent systems perform many financial and controlling tasks automatically. This raises an important question: **will AI replace the traditional role of the controller, or will it transform it?**

WHAT IS AUTONOMOUS FINANCE?

Autonomous Finance refers to the use of advanced technologies to automate financial and controlling processes.

In this model, intelligent systems can:

- collect and process large volumes of financial data,
- automatically generate reports and forecasts,
- detect anomalies and risks,
- support strategic decision-making.

As a result, many routine tasks traditionally performed by controllers can be executed by automated systems.

KEY TECHNOLOGIES SUPPORTING AUTONOMOUS CONTROLLING:

- Artificial Intelligence (AI)
- Machine Learning
- Robotic Process Automation (RPA)
- Business Intelligence (BI)

IMPACT ON THE ROLE OF CONTROLLER

Autonomous finance does not necessarily eliminate the role of the controller but **transforms it significantly.**

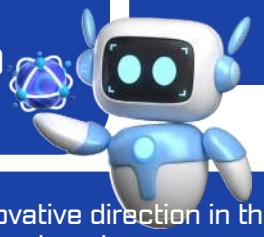
Traditional controller tasks:

- manual data collection
- report preparation
- historical analysis

Future controller tasks:

- interpreting AI-generated insights
- strategic decision support
- business partnership with management
- supervising automated systems

The controller evolves from **a data processor into a strategic advisor.**



Autonomous finance represents an innovative direction in the development of controlling systems. While artificial intelligence can automate many operational tasks, **human expertise remains essential for interpretation, strategic thinking, and managerial communication.**

Rather than replacing controllers, AI is likely to **enhance their capabilities and redefine their role** within modern organizations.

The controller of the future will combine **financial expertise, analytical skills, and technological knowledge** to support data-driven decision-making.

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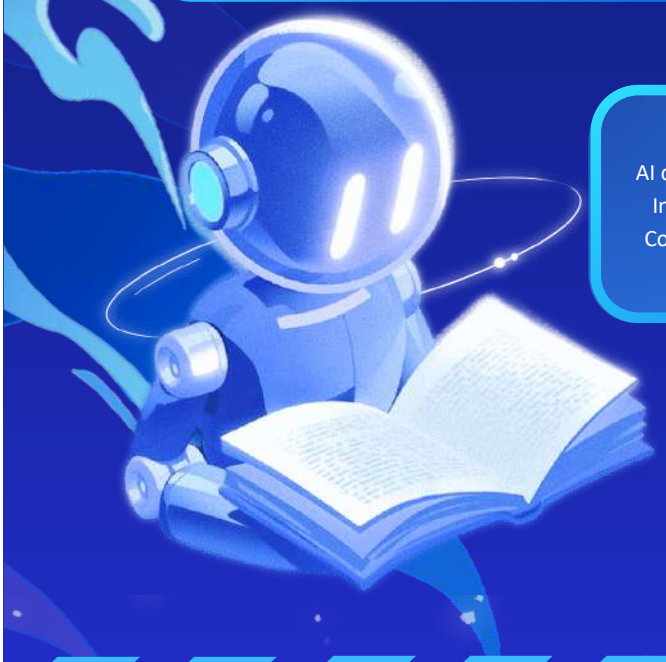
CONTROLLING SUPPORT AGENTS
CHATBOTS AND VIRTUAL ASSISTANTS

AI Assistants in Controlling

Modern controlling requires fast access to reliable data and analytical support. Chatbots and virtual assistants based on Artificial Intelligence (AI) help controllers by providing information quickly and supporting managerial decisions.



Fast Access to Data

AI chatbots enable users to access financial data, Key Performance Indicators (KPIs), and reports using natural language questions. Controllers can ask simple questions and receive instant answers without using complex reporting systems.

Decision Support Functions

Virtual assistants support decision-making by analyzing data, identifying trends, and explaining deviations. They help managers understand what is happening in the organization and what actions may be required.

Automation of Routine Tasks

Chatbots and virtual assistants can automate repetitive tasks such as report preparation, data validation, and answering standard controlling questions. Automation reduces the time needed for routine activities and limits the risk of human error. Additionally, AI assistants can schedule reports, send automatic alerts, and notify managers about deviations from plans or budgets. This ensures that relevant information is delivered at the right time without manual intervention. As a result, controllers can focus more on analytical, advisory, and strategic tasks, while routine processes are handled efficiently by digital tools.

Benefits and Future Development

The use of AI assistants increases efficiency, improves transparency, and supports faster decisions. In the future, chatbots are expected to become more advanced and play a greater role in digital controlling systems.

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CONTROLLING SUPPORT AGENTS: CHATBOTS AND VIRTUAL ASSISTANTS

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Mateusz Kozak
Maksymylian Tęczar

Dashboard Reporting in Controlling as a Tool for Faster Decision-Making

Dashboard Reporting in Modern Controlling

The aim of this poster is to present the role of dashboard reporting in controlling processes and its impact on business decision-making.

What is Dashboard in Reporting?

Dashboard reporting is a method of presenting business data using visual charts and indicators. It enables controllers to monitor company performance in real time.

Key Elements of Dashboards

- Revenue
- Costs
- Profit
- KPIs
- Sales performance

Applications in Controlling

- Budget monitoring
- Cost control
- Financial reporting
- Performance analysis
- Forecasting support

Benefits of Dashboard Reporting

- Faster decision-making
- Better data visualization
- Easy monitoring of KPIs
- Improved efficiency
- Real-time insights

Challenges of Dashboard Reporting

- Data quality problems
- Need for regular updates
- Risk of misinterpretation
- Implementation costs

Future of Dashboard Reporting

Dashboard reporting will become more automated and integrated with advanced analytics tools.

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DISADVANTAGES OF REMOTE WORK

What is remote work?

Remote work means working outside the traditional office, usually from home, using digital tools and online communication.

Main disadvantages of remote work:

Lack of social interaction
Limited contact with colleagues can lead to loneliness and isolation.

Communication problems
Online communication may cause misunderstandings and delays.

Lower motivation
Working alone can reduce engagement and self-discipline.

Work-life imbalance
It is harder to separate work time from personal life.

Technical problems
Internet issues and equipment failures can disturb work.

Data security risks
Working outside the office increases the risk of data leaks.

Effects of remote work challenges:

- Decreased productivity
- Higher stress level
- Concentration problems
- Lower job satisfaction

Conclusion: Remote work offers many benefits, but it also creates serious challenges. Good organization, communication and self-discipline are essential to reduce its negative effects.

Created in Canva

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EMPLOYEE WELL-BEING IN THE ERA OF REMOTE AND HYBRID WORK

INTRODUCTION

The transition to telework is no longer a temporary measure but a structural shift. While it offers unprecedented flexibility, it introduces new challenges for mental health and organizational cohesion.

The future of work depends on a shift from managing tasks to managing the human experience. Addressing the affective and cognitive costs of telework is not just a health requirement but a prerequisite for organizational innovation and resilience in the hybrid era.

NEGATIVE OUTCOMES OF REMOTE WORK ON WELL-BEING

PSYCHOSOMATIC	Eye strain, blurred vision, head/neck pain, and reduced sleep quality due to prolonged digital device use.
COGNITIVE	The "always-on culture" preventing mental detachment from work; mental fatigue caused by extensive use of digital devices (e.g. video calls).
SOCIAL	Social isolation, lack of face-to-face interaction, and blurred boundaries between work and private life.
AFFECTIVE	Negative emotions, emotional exhaustion, loss of job satisfaction, and organizational commitment. Includes stress, anxiety, depression, and technology dependency.
PROFESSIONAL	Feeling the pressure to be constantly available, techno-overload resulting from long working hours and inability to "switch off."

Research indicates that Internal Corporate Social Responsibility (CSR) is the bridge between employee health and organizational success.
- Organizations that proactively manage well-being see higher levels of innovative work behavior.
- Reducing digital overload is essential for maintaining long-term employee commitment and job satisfaction.

FOUR STRATEGIC APPROACHES FOR THE FUTURE

1. **THE RIGHT TO DISCONNECT – FORMALIZING BOUNDARIES TO COMBAT THE "ALWAYS-ON" CULTURE AND PROFESSIONAL BURNOUT.**
2. **HUMAN-CENTRED LEADERSHIP – SHIFTING FOCUS FROM MONITORING "SCREEN TIME" TO SUPPORTING PSYCHOLOGICAL SAFETY AND SOCIAL INCLUSION.**
3. **DIGITAL ERGONOMICS – ADDRESSING PSYCHOSOMATIC RISKS THROUGH BETTER EQUIPMENT AND MANDATORY "DIGITAL BREAKS."**
4. **SOCIAL CAPITAL BUILDING – CREATING INTENTIONAL SPACES FOR FACE-TO-FACE OR HIGH-QUALITY VIRTUAL SOCIAL INTERACTIONS TO FIGHT ISOLATION.**

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CMQ MODULE - PROJECT DESCRIPTION

FROM NUMBER CRUNCHER TO STRATEGIC ADVISOR: HOW AI IS RESHAPING THE CONTROLLER'S ROLE

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1 PROJECT OBJECTIVE & CONTEXT

- Presenting the transformation of the financial controller profession driven by AI.
- Shift from historical reporting to strategic advisory.

2 TRADITIONAL VS. AI-AUGMENTED CONTROLLING

TRADITIONAL (Past)

- Manual data entry
- Heavy reliance on Excel
- Focus on historical results
- Manual error detection.

AI-AUGMENTED (Future)

- Process automation
- Predictive analytics
- Value creation
- Real-time insights.

3 KEY AI TECHNOLOGIES IN CONTROLLING

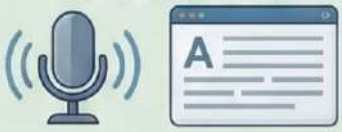
1. PREDICTIVE ANALYTICS (Machine Learning)

- Forecasting trends and sales
- Anomaly detection
- Historical data analysis.

2. ROBOTIC PROCESS AUTOMATION (RPA)

- Automating routine tasks
- Data consolidation and invoice processing
- Significant time savings.

3. NATURAL LANGUAGE PROCESSING (NLP)



- Generating descriptive commentaries
- Financial summaries from data
- Automated narrative reporting

4 IMPACT ON MANAGEMENT EFFECTIVENESS

- **REAL-TIME DECISIONS** (Precise insights immediately)

- **RISK MANAGEMENT** (Proactive threat detection)

- **CONTROL AND OPTIMIZATION** (Process efficiency)

- **BUSINESS PARTNERSHIP** (Controller as a strategic advisor)

5 VISION OF THE FUTURE: THE AUGMENTED CONTROLLER

AI as the controller's technological 'co-pilot'. Combining technology with human intuition, Ethical judgment, and strategic thinking.

Controllers using AI will replace those who do not. AI is a supporting tool, not a human replacement.

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Iga Gaweł | Maria Mikołajek

MANAGERIAL DASHBOARDS IN CONTROLLING

as a Tool Supporting Desision-Making in Organizations

Introduction

Modern organizations generate large amounts of financial and operational data. To effectively analize this data and support managerial decision-making, companies increasingly use Business Intelligence (BI) systems.

One of the most important tools for data visualization are managerial dashboards, which provide quick access to key information about the organization's performance.

Dashboards in Controlling

In controlling, dashboards play an important role as analytical tools. They allow controllers and managers to monitor financial and operational results in real time.

Using dashboards enables organizations to:

- quickly identify deviations from the plan
- analyze trends and changes over time
- make more accurate and data-driven business decisions

Financial Dashboard

What is a Dashboard?

A dashboard is an interactive visual interface that presents the most important data and business indicators in the form of charts, tables, and graphs.

The main purpose of dashboards is to:

- provide quick access to information
- monitor company performance
- support managerial decision-making

KPIs & BI Tools

Key Performance Indicators (KPIs)

- Revenue
- Operating costs
- Net profit
- Operating margin
- EBITDA
- Return on investment (ROI)

Popular Business Intelligence (BI) Tools

- Microsoft Power BI
- Tableau
- SAP Analytics Cloud
- Qlik Sense

Benefits

Benefits of dashboarding in controlling

- fast access to important data
- better monitoring of company's performance
- support in managerial decision-making
- real-time analize of trends

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Measuring AI Performance

Key Indicators and Business Impact

Wiktoria Korona

Artificial Intelligence (AI) is increasingly used in controlling and business decision-making. However, its effectiveness must be measured to ensure real value creation.

What are KPIs?

Key Performance Indicators (KPIs) are measurable metrics used to evaluate how effectively goals are achieved. In AI, they help track performance, align solutions with business objectives and support better operational and financial results.

AI KPI Categories

The most important AI KPIs can be grouped into four main categories: efficiency, effectiveness, business impact, and risk & compliance. These categories provide a comprehensive view of AI performance, from technical accuracy to real business value and reliability.

Efficiency

Efficiency KPIs measure how well AI improves operations and reduces manual work. They focus on faster processing, higher automation and fewer errors. These indicators show whether AI increases productivity and streamlines financial processes.

Effectiveness

Effectiveness KPIs evaluate how accurate and reliable AI models are. They assess prediction quality, risk detection and error reduction. These metrics ensure that AI supports correct and data-driven decisions.

Business Impact

Business KPIs measure the financial value created by AI. They include cost savings, revenue growth and customer satisfaction. This category shows whether AI contributes to overall business performance.

Fairness & Compliance

These KPIs ensure that AI systems are ethical, transparent and compliant with regulations. They focus on reducing bias, improving explainability and meeting legal standards. This helps build trust and minimize risk.

Tracking AI KPIs Over Time

AI performance must be continuously monitored to ensure it remains accurate, efficient and aligned with business objectives. Organizations use real-time dashboards, regular performance reports and automated alerts to track key metrics and detect potential issues. Continuous monitoring and regular model updates are essential to maintain reliability, reduce risk and maximize the business value of AI.

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Optimizing Controlling Processes in a Digital Ecosystem

Eliza Hybel
Emilia Cyrkiel
Weronika Badura

Leveraging Cloud Computing and AI for Reporting Automation and Time Management

INTRODUCTION & THE CHALLENGE

- **Context**: Modern business is complex, data-driven, and often geographically distributed (hybrid work models).
- **The Problem**: Heavy reliance on manual data processing and information silos leads to lagging reports and a high risk of error.
- **The "Time Trap"**: Controllers currently spend 80% of their time on data preparation and only 20% on valuable analysis.

The Vision: Digital Controlling Ecosystem

The ultimate vision of the digital controlling ecosystem is to transition the controller's role from a traditional "data cruncher" to a "strategic business partner." This transformation is driven by a seamless, AI-analyzed, and cloud-hosted integrated environment. By adopting this modern concept, organizations experience a fundamental shift from static, backward-looking periodic reporting to dynamic, real-time, and predictive insights.

CLOUD COMPUTING

- Secure data availability 24/7 for remote and hybrid teams.
- One centralized data lake eliminates discrepancies.
- Instant connection between ERP, CRM, and HR.
- IT infrastructure grows seamlessly with the business.

ARTIFICIAL INTELLIGENCE (AI)

- Software bots instantly execute routine data collection.
- AI forecasts financial trends with superior accuracy.
- Smart algorithms spot data errors before reports are finalized.
- AI automatically drafts initial notes on budget variances.

RESULTS: BUSINESS IMPACT & EFFICIENCY GAINS

The true value of this transformation is achieving operational excellence by eliminating reporting bottlenecks and costly human errors. Organizations reverse the traditional 80/20 ratio, drastically reducing time spent on manual tasks and empowering controllers to focus entirely on high-value strategic analysis. Consequently, management is provided with forward-looking, timely, and actionable insights, fostering enhanced decision-making and business agility to react swiftly to market changes via rolling forecasts and live dashboards.

FUTURE OUTLOOK THE AUGMENTED CONTROLLER

The New Role: The Controller evolves into an "Internal Consultant" and "AI Interpreter".

Continuous Innovation: The digital ecosystem sets a solid foundation for future tech adoption (e.g., Blockchain).

Synergy: Combining human judgment, ethics, and strategic thinking with AI's processing speed.

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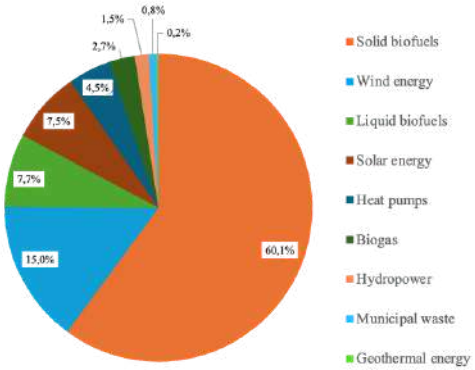
Kinga Maj
Natalia Bliźnik
Piotr Bieleński

Strategic Energy Management in Poland

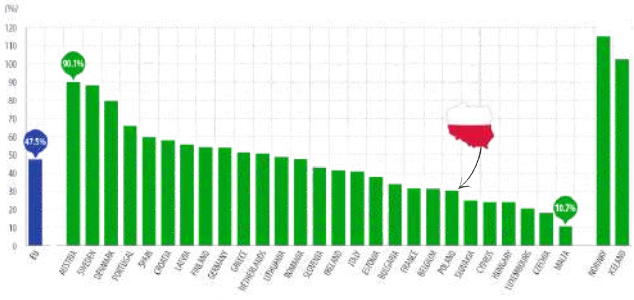
Renewable Energy Sources (RES) are energy carriers derived from natural, non-fossil processes that replenish themselves faster than they are consumed. Unlike coal or gas, which take millions of years to form, these sources are practically inexhaustible on a human timescale. In the context of the Polish energy landscape as of 2024, RES accounted for 17.7% of the gross final energy consumption.

RES structure in Poland (2024)



Source of data: GUS

Share of energy from renewable sources in gross electricity consumption (2024)



Source of data: Eurostat

The 2024 Eurostat data reveals that Poland's share of renewable energy sources (RES) in gross electricity consumption has reached 30.2%. While this remains below the European Union average of 47.5%, Poland has successfully outpaced several regional peers, including Hungary (24.1%) and Czechia (17.9%). However, the significant gap compared to leaders like Austria (90.1%) underscores the scale of the ongoing structural transformation required for the Polish energy sector.

Businesses Thrive with Renewables

The development of renewable energy sources in Poland enables companies to gradually reduce their dependence on rising conventional energy prices. Investments in renewables, such as photovoltaic installations or wind farms, allow for long-term cost stabilization and improve budget predictability.

The implementation of renewable energy sources positively influences how companies are perceived by customers and investors. Those who use renewables build an environmentally responsible image, which enhances their competitiveness, especially in international markets and among environmentally conscious consumers.

The energy transition supports the adoption of modern technologies and fosters innovation within companies. The use of renewable energy is often associated with the digitalization of energy management processes, leading to increased operational efficiency and the creation of new business models.

Despite numerous benefits, companies in Poland also face barriers in adopting renewable energy, such as high initial investment costs, regulatory instability, and infrastructure limitations. Overcoming these challenges is crucial for the continued growth of renewable energy in the business sector.

THE EYE IS YOUR WALLET

Gabriela Grabowska, Gaja Czech, Katarzyna Dyndał

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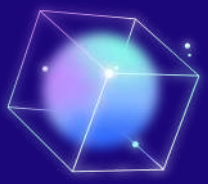
Oliwia Krzemińska
Julia Wojtasik

THE FUTURE OF LEADERSHIP IN THE AGE OF ARTIFICIAL INTELLIGENCE

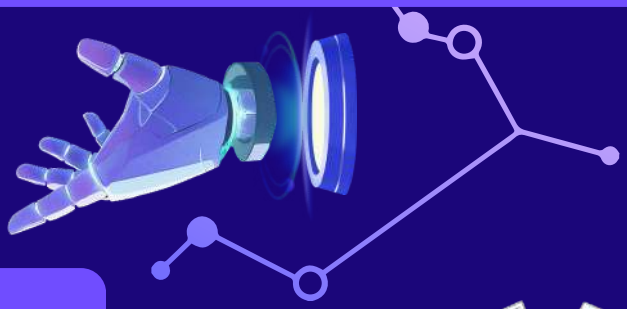
INTRODUCTION - THE CONTEXT OF CHANGE

The dynamic development of artificial intelligence and ongoing digital transformation are reshaping the role of leaders. AI influences work organization, decision-making processes, and the psychological well-being of managers. It has transformative potential, changing the nature of work and the structure of the labor market. As technology advances, leadership must be redefined within the digital environment.



WHAT IS ARTIFICIAL INTELLIGENCE?

Artificial intelligence refers to computer systems capable of analyzing data, learning, and making decisions with a certain level of autonomy. It includes machine learning and deep learning as core components. AI can function as software (e.g., speech recognition or image analysis) or be embedded in physical devices. Its performance relies on large datasets, and its outputs require critical assessment and responsible use.



THE IMPACT OF AI ON EVERYDAY LEADERSHIP

Leaders indicate the growing importance of AI tools that support process automation, report preparation, data analysis, and decision recommendations. In the coming years, recommendation systems, automation tools, and AI-based planning solutions are expected to play a key role. In project management, AI enables large-scale data analysis, risk prediction, planning optimization, and automation of repetitive tasks. As a result, part of operational responsibilities is shifting from leaders to technological systems.

OPPORTUNITIES FOR LEADERS

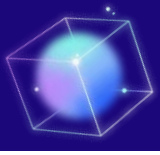
The use of AI reduces the time spent on routine tasks and analytical work, creating more space for strategic activities. Process automation improves work organization and allows leaders to devote more time to interpersonal relationships. In project management, AI supports team-task alignment, data analysis, communication improvement, and progress monitoring. Technology can therefore enhance efficiency and decision accuracy.

RISKS AND CHALLENGES

Concerns include potential job displacement, performance pressure, and information overload. There is also a risk of mechanical decision-making based solely on technological suggestions and a reduced reliance on leaders' intuition. Generative AI systems may produce incorrect outputs, known as hallucinations, which require careful and responsible use. Ethical issues such as transparency, accountability, and system security are also significant challenges.

THE FUTURE LEADER - KEY COMPETENCIES IN THE AI ERA

AI is mainly perceived as operational support rather than a creative decision-making partner. This increases the importance of conscious technology use and critical evaluation of AI-generated recommendations. Implementing AI solutions requires attention to transparency, security, accountability, and ethical standards. Leadership in the AI era combines technological competence with reflection and preserved decision-making autonomy.



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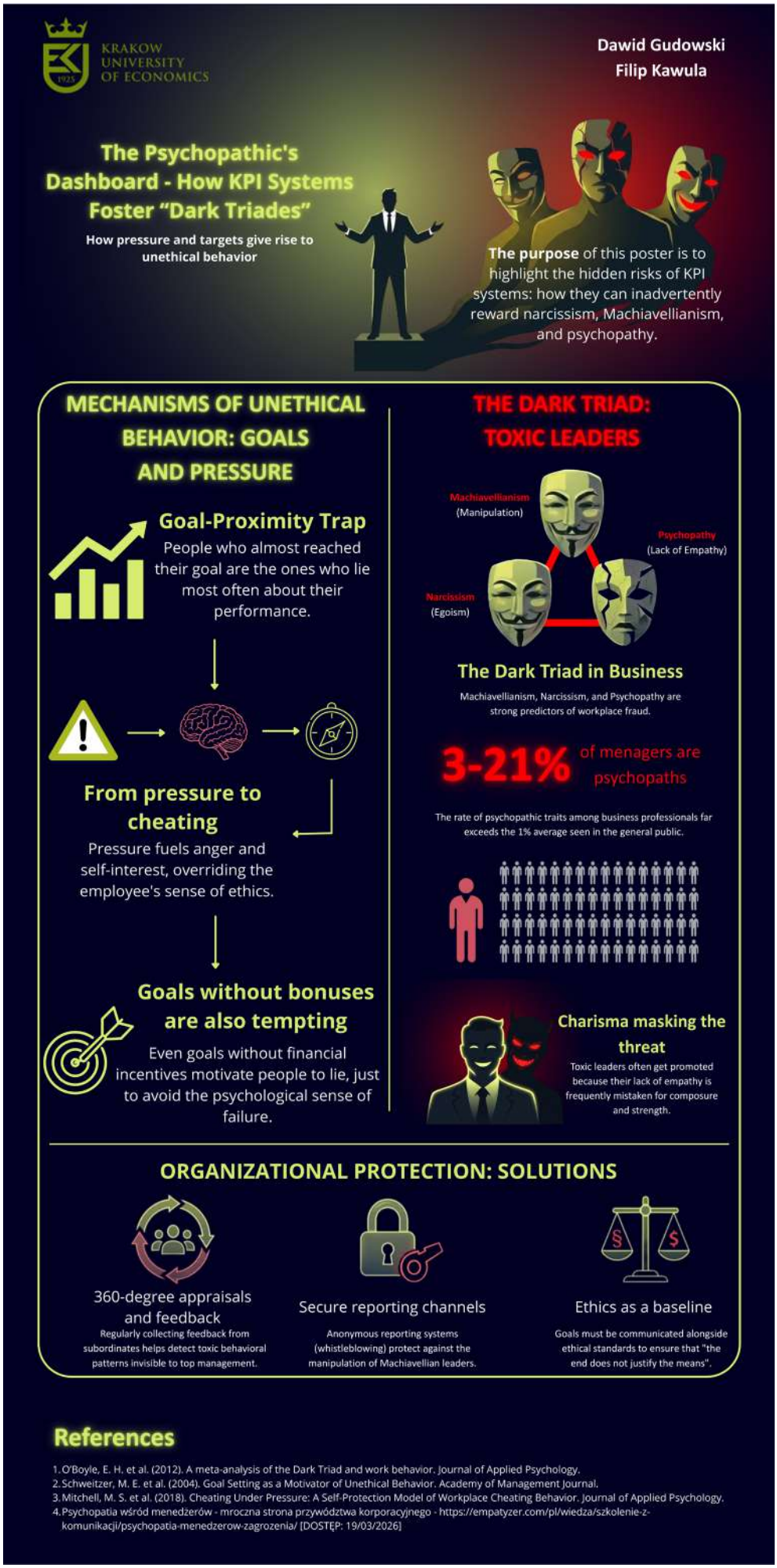

THE PSYCHOPATHIC'S DASHBOARD – HOW KPI SYSTEMS FOSTER "DARK TRIADES"

Dawid Gudowski, Filip Kawula

KRAKOW UNIVERSITY OF ECONOMICS

Szymon Górecki
Kacper Harkabuz

WORKING FROM HOME IN EUROPE BEFORE AND DURING THE COVID-19 PANDEMIC

INTRODUCTION

The COVID-19 pandemic significantly transformed work organization across Europe. Lockdowns, social-distancing measures, and workplace restrictions forced many firms and employees to adopt remote work arrangements. Although working from home already existed before the pandemic, its prevalence increased sharply during 2020–2021 as firms invested in digital tools and employees adapted their homes as workplaces.

OBJECTIVE OF THE POSTER

This poster analyzes the evolution of working from home (WFH) in European countries before and during the COVID-19 pandemic. The research focuses on three questions: how remote work changed between 2011 and 2022, what differences exist across countries, industries, and occupations, and whether working from home helped protect employment during the pandemic. The analysis is based on data from the EU Labour Force Survey covering 28 European countries.

EVOLUTION OF WORKING FROM HOME

Between 2011 and 2019 working from home increased gradually across European countries. The most dramatic change occurred during the pandemic years. In most countries the increase in remote work between 2019 and 2021 was larger than the total increase observed during the entire 2011–2019 period. Although working from home declined slightly in 2022 after restrictions were lifted, its prevalence remained above pre-pandemic levels.

DIFFERENCES ACROSS COUNTRIES

The prevalence of remote work varies substantially across Europe. Scandinavian and North-Western countries such as Sweden, Denmark, Finland, and the Netherlands report the highest levels of working from home. In contrast, Southern and Eastern European countries including Bulgaria, Romania, Greece, and Italy show much lower levels. These differences reflect variations in economic structure, digital infrastructure, and labor market institutions.

INDUSTRY AND OCCUPATION DIFFERENCES

Working from home opportunities depend strongly on industry and occupation. Industries that intensively use information and communication technologies, such as information services and education, show the highest levels of remote work. Construction, transport, and accommodation services have much lower levels due to the physical nature of their tasks. Similarly, managers and professional occupations display the highest remote work levels, while blue-collar occupations have very limited possibilities for working from home.

WORKING FROM HOME AND EMPLOYMENT

The study finds that industries and occupations with higher levels of working from home experienced smaller employment losses during the COVID-19 pandemic. Remote work allowed economic activity to continue despite mobility restrictions and workplace closures, thereby acting as a buffer against labor market disruptions.

CONCLUSIONS

Working from home increased gradually before COVID-19 and rose sharply during the pandemic years. Large differences exist across countries, industries, and occupations. Remote work is strongly associated with lower employment losses during economic shocks. Even after the pandemic restrictions ended, the prevalence of remote work remains above pre-pandemic levels, suggesting that working from home will remain an important feature of the European labour market.

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WORKING FROM HOME IN EUROPE BEFORE AND DURING THE COVID-19 PANDEMIC
Szymon Górecki, Kacper Harkabuz

PART III

People and the Future of Work in the Digital Organization

KRAKOW UNIVERSITY OF ECONOMICS

Sara Marczyk
Małgorzata Wielgus
Magdalena Szostak

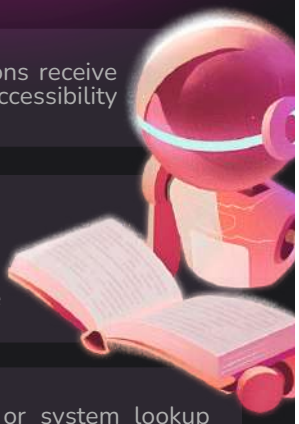
AI IN CUSTOMER SERVICE: CHATBOTS AND AUTOMATED RESPONSES

AI chatbots answer common customer questions (e.g., order status, returns, invoices) via chat on websites and apps. They speed up support and escalate complex cases to human agents.

AI chatbots and automated responses can improve customer service by handling repetitive requests. This poster highlights common use cases across industries and summarizes the main benefits, limitations, and good practices for implementation.

OVERVIEW

Customer service is expected to be fast, available 24/7, and consistent. Many organizations receive high volumes of similar questions every day. AI chatbots reduce waiting time and improve accessibility by answering common requests instantly and guiding users through simple procedures.



WHERE IT IS USED

E-commerce: shipment status, returns, product availability, payment support.
Banking: basic guidance (e.g., card issues), product information, branch and contact details.
Telecom / Utilities: invoices, service troubleshooting, plan changes, outage information.
Public services / Universities: procedures, deadlines, required documents, navigation to the right unit.

HOW IT WORKS

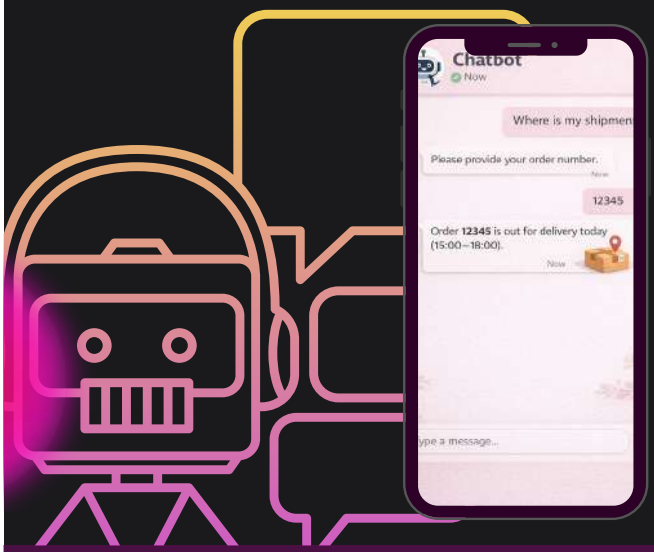
Customer message → intent recognition → response from verified knowledge base or system lookup (status/CRM) → escalation to a human agent if needed.

BENEFITS

Chatbots provide immediate answers, reduce repetitive tickets, and allow human agents to focus on complex cases that require empathy and judgement. They also improve consistency by delivering the same information aligned with company policy.

GOOD PRACTICES

A visible “Talk to a human agent” option, verified and frequently updated content, monitoring and improving conversations, and proper authentication for any actions involving personal data.



RISKS AND LIMITATIONS

- Chatbots may misunderstand unusual questions or provide incorrect answers if the knowledge base is outdated.
- Customers can become frustrated if escalation is unclear.
- Privacy and compliance are critical when personal data is processed or when the chatbot accesses account-specific information.

AI chatbots are most effective for simple, repetitive customer requests. With clear escalation paths and strong data protection, they improve customer experience and support service teams without replacing human agents.

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AI IN CUSTOMER SERVICE: CHATBOTS AND AUTOMATED RESPONSES
Sara Marczyk, Małgorzata Wielgus, Magdalena Szostak

KRAKOW UNIVERSITY OF ECONOMICS

Patryk Przerada
Norbert Trela

AI-Driven Analytics & Predictive Modeling in Strategic Management

From raw data to strategic foresight. This poster maps out how modern managers use AI to transform complex datasets into powerful predictive models that drive real business value.

Shaping Strategy with AI

AI is driving the shift to data-driven management. Through advanced predictive modeling, organizations can transform massive datasets into actionable intelligence to optimize resources and forecast market trends with unprecedented precision.

Data Foundations & Engineering:

- Data Acquisition: Automating the collection of structured and unstructured data across all sources.
- Quality Control: AI-driven data cleansing to eliminate noise and ensure model integrity.
- Real-Time Integration: Dynamic pipelines enabling instant data processing and rapid market reaction.

Strategic Implementations:

- Predictive Analytics: Utilizing non-linear modeling to forecast sales, demand and market risks.
- Prescriptive Modeling: AI-driven recommendations (e.g., optimal pricing, inventory) to maximize ROI.
- Real-Time Support: Automated insights allowing managers to react to shifts in seconds.

Strategic Value & Impact:

- Evidence-Based Decisions: Replacing subjective "gut feelings" with empirical, data-backed insights.
- Operational Efficiency: Drastically reducing the time required for complex scenario analysis.
- Scalability: Running thousands of simultaneous "what-if" simulations to stress-test strategies.

Threats & Implementation Risks:

- Algorithmic Bias: The risk of perpetuating historical prejudices due to flawed training data.
- Security & Privacy: Data breach vulnerabilities and the challenge of strict GDPR compliance.
- Technical Debt: High maintenance costs for complex models that require constant updates.

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Małgorzata Nowaczek
Maria Kaczor

CONTINUOUS IMPROVEMENT CULTURE AS A DETERMINANT OF BUILDING ORGANIZATIONAL COMPETITIVE ADVANTAGE

In an era of dynamic globalization and Industry 4.0, technology is no longer the most important factor in building a competitive advantage. Nowadays organizational culture is gaining increasing importance. A continuous improvement culture - through the use of its special methods, employee engagement and constant process optimization - helps companies maintain their market position and build a competitive advantage.

WHAT IS CONTINUOUS IMPROVEMENT?

Continuous improvement (Kaizen) is a management philosophy that engage all employees. It is based on building a culture of mutual cooperation, where employees collectively discuss and systematically solve problems. The Kaizen focuses on understanding and meeting customer needs, eliminating waste, and improving quality. It is strive for perfection and doing work better and better.

CONTINUOUS IMPROVEMENT METHODS

LEAN MANAGEMENT

It focuses on identifying value from the customer's perspective, dofferentiating between value-added and non-value-added activities, and eliminating waste. It fosters a culture where all employees are committed to cost reduction, shortening lead times, and improving quality. Personal commitment of employees, their education, and developing leaders are essential.

THE PDCA (DEMING) CYCLE

Plan (P) - identifying the problem, creating a solution and a plan for its implementation
Do (D) - implementing the plan in the organization
Check (C) - checking, whether solutions introduced brought adequate results
Act (A) - standardization, application of implemented solutions, recognition of them as a new norm.

SIX SIGMA

The name refers to a rate of 3.4 defects per million opportunities, or six times the standard deviation, representing the very high product quality this method strives for. It is based on customers, unrestricted collaboration, and personal commitment. It is essential to create the ability to perform measurements, collect data, and use it to analyze quality levels.

Deming developed questions that one can ask oneself to better understand the essence of continuous improvement:

what I have done these day to advance my learning and skill on my job?
is every job in an organization done better than the one before?
is there continual improvement of matirials, of selections of new emoployees, of the skills, and in methods to understand better each new customers needs?

BUILDING COMPETITIVE ADVANTAGE

Applying the above methods supports the organization's functioning in a dynamic environment and contributes to building a competitive advantage. Improving quality reduces costs due to fewer errors and delays, which improves productivity and leads to market penetration with better quality at a lower price. A culture of continuous improvement facilitates easier and faster achievement of set goals thanks to employee engagement and cooperation. All continuous improvement methods are customer-focused, delivering the quality and value they expect.

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Cybersecurity of Financial Data in the Age of Digitalization

The digitalization of financial processes is considered one of the key trends of the modern world. Online banking marked the beginning of a technological revolution in finance, enabling convenient and efficient access to financial services and significantly transforming the industry. Companies increasingly rely on advanced IT systems to manage accounting, financial reporting, and transactions, which helps reduce costs and improve the efficiency of business processes.

However, the growth of digitalization also increases the need for stronger cybersecurity. Businesses are becoming more frequently exposed to cyberattacks, which often aim to steal financial data. For example, banks have identified cyber risk as greater than credit risk (2022). Financial data plays an important role in the management of enterprises, as it includes accounting records as well as information about customers and business partners. Due to its confidentiality and often high value, such data requires proper protection. It should be emphasized that the loss of sensitive data can disrupt business operations and damage a company's reputation, leading to financial losses. Therefore, ensuring the security of financial data has become one of the most important challenges in the era of digitalization.

Cyber Threats in Companies

Most Common Cyber Threats

→ Phishing & social engineering
→ Ransomware
→ Data breaches
→ Distributed Denial of Service attacks
→ Supply chain vulnerabilities

Insider Threats

→ Human error
→ Weak password practices
→ Unauthorized access to data
→ Malicious insiders

Consequences of Cyberattacks

→ Financial losses
→ Data loss or theft
→ Operational disruption
→ Legal penalties
→ Reputation damage

Financial Data Protection and New Technologies

Methods of protecting financial data

Companies protect financial data through encryption, multi-factor authentication (MFA), backups, and access control. These measures help prevent unauthorized access, data loss, and cyberattacks.

The role of IT systems

Modern IT systems play a key role in cybersecurity by supporting access control, data security, continuous monitoring, and threat detection. They help organizations identify unusual activity, protect sensitive financial information, and respond more effectively to cyber risks.

The role of AI

Artificial intelligence plays an important role in cybersecurity by detecting unusual transactions, identifying fraud attempts, and analyzing threats in real time. This helps companies respond faster and protect financial information more effectively.

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Maria Matyjewicz
Julia Nowak

Data Storytelling in Finance: How BI Systems Are Changing the Way You Communicate Results to Management?

This project investigates how integrating Business Intelligence with Data Storytelling solves the problem of ineffective financial reporting, transforming raw data into strategic narratives that drive executive decisions.

What is Data Storytelling?

Data Storytelling bridges the gap between complex data and human understanding. Instead of presenting raw spreadsheets, it transforms numbers into a clear, structured narrative—guiding the audience from an initial problem straight to an actionable solution.

Fact: Research shows that stories are 20x more memorable than dry statistics!

The board needs stories, not spreadsheets!

- Trust over complexity
- Context over Jargon
- Action over Paralysis
- Vision over isolated metrics

BI: the engine behind the story

Business Intelligence systems are the technological foundation of modern reporting. While Data Storytelling provides the narrative, BI provides the essential architecture by:

- Automating Consolidation
- Dynamic Visualization
- The Perfect Synergy

Common data storytelling pitfalls to avoid

Even the best BI system fails if the finance narrative is poor. Beware of these mistakes:

Data Dumping:
overloading dashboards with all possible KPI's and lack of hierarchy/ focus

Chartjunk
using cluttered/too colorful visualisations

Lack of narrative
ending with no conclusions
management left with questions

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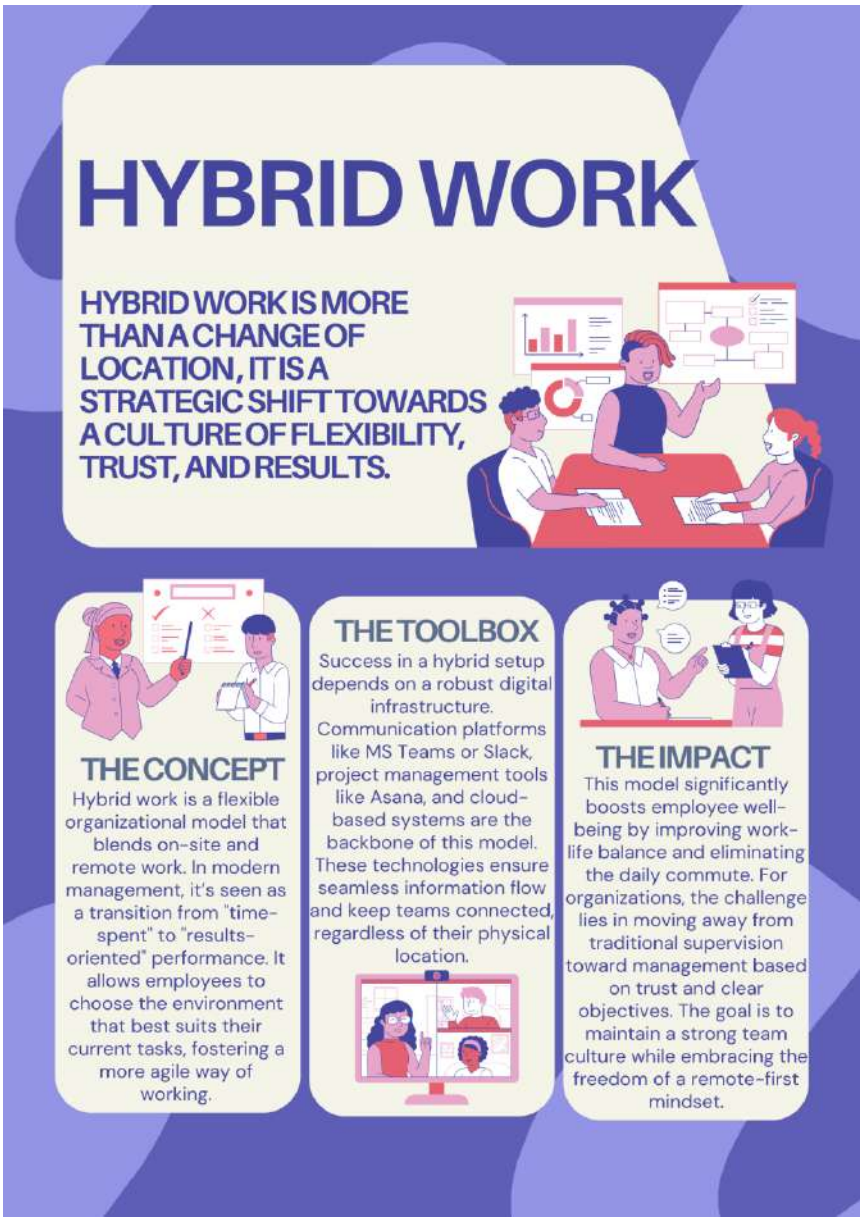
Alicja Palmi

Emilia Kaplita

"Hybrid work"

This poster analyzes the transition to a hybrid work model, demonstrating how digital tools enable a results-oriented management style that balances operational efficiency with employee well-being.

The objective of this poster is to analyze how the transition to a hybrid work model, supported by digital tools, addresses the challenge of maintaining organizational efficiency while



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IMPACT OF AI-DRIVEN AUTOMATION ON THE LABOR MARKET: OPPORTUNITIES AND THREATS

Bartosz Mazur, Łukasz Madej, Julia Grzywna

KRAKOW UNIVERSITY OF ECONOMICS

Kinga Panek
Oliwia Osuch
Justyna Kuc

MANAGERIAL DASHBOARDS: HOW DATA VISUALIZATION HELPS MANAGE A COMPANY?

Managerial dashboards are tools that help companies better understand and utilize online data. They support the decision-making process by providing key information in an accessible visual form. They enable ongoing performance monitoring and allow for quick responses to changing market conditions. Thanks to them, it is possible to identify areas that require improvement and track progress in the implementation of business strategies.

The purpose of this poster is to present how managerial dashboards support decision-making processes through effective data visualization.

Types of dashboards:

- **Strategic** → overall view of the company and long-term goal achievement
- **Analytical** → detailed analysis of data and trends
- **Operational** → real-time monitoring of processes
- **Tactical** → support for decision-making at team and departmental levels

Benefits of using dashboards:

- **Better data visibility** → all key KPIs in one place
- **More accurate decisions** → access to up-to-date and reliable information
- **Faster response** → real-time data and intuitive visualizations
- **Higher efficiency** → improved performance monitoring and optimization
- **Fewer errors** → quick detection of issues and deviations

What should be included on dashboard:

- **Company KPIs** → key indicators aligned with strategy (e.g. revenue, profitability)
- **Customization** → ability to tailor data and analysis scope
- **Department performance** → e.g. sales, production, customer service
- **Employee performance** → goal achievement and work efficiency
- **Revenue metrics** → e.g. profit margin, revenue per customer

Use simple, proven visuals for easy dashboard interpretation:

- **Trends over time** → Use a line chart to show growth, decline, or seasonality across days, months, or years
- **Comparing categories** → Use a bar chart (vertical or horizontal) to compare sales, marketing channels, or market share
- **Part-to-whole** → Instead of pie charts, use a 100% stacked bar chart for clearer comparison of proportions
- **Relationships between variables** → Use a scatter plot to identify correlations (e.g., ad spend vs. conversions)

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NATALIA ROBAK
ZOFIA PORĘBSKA
ZOFIA POLAK

PAY WITH A GLANCE: THE FUTURE OF OCULAR BIOMETRICS

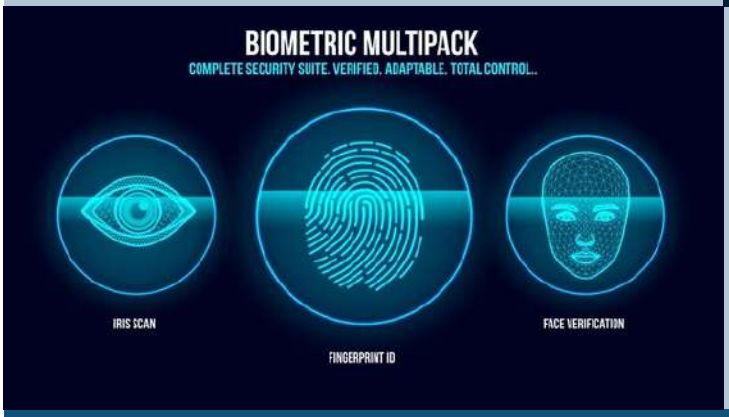
WHAT ARE BIOMETRIC PAYMENTS?

Each of us possesses unique biological characteristics that form the foundation of biometric payments. It is a payment method where the transaction authorization process is based on the user's individual physical features.

These include:

- Fingerprint recognition;
- Facial scanning;
- Iris scanning;
- Voice recognition.

PayEye scans the user's eye with infrared light and verifies it against securely stored data.



FIRST PILOT PROGRAMS: POLAND AS A EUROPEAN LEADER

In 2024, interesting trials were conducted in several Empik stores in Poland. In cooperation with technology providers such as Mastercard, PayEye, and Planet Pay, the company introduced pilot biometric payments using a fusion of iris and facial recognition. Interestingly, Poles were once again trendsetters, as these were the first tests of this kind on a European scale. Currently, however, widespread biometric payments are not yet possible in Poland. This requires further infrastructure development and building consumer awareness.

KEY BENEFITS OF BIOMETRIC PAYMENTS

- **Unrivaled uniqueness:** Your biological traits are one of a kind. Unlike PINs or passwords that can be guessed, stolen, or lost, biometric data is strictly linked to you. It is impossible for someone else to replicate your iris pattern or fingerprint to authorize a transaction.
- **Ultimate convenience:** Biometrics eliminate the "password fatigue." You no longer need to memorize complex codes or worry about forgetting your wallet. Your "key" to your bank account is always with you, making the payment process seamless and faster than ever.
- **Enhanced long-term security:** In the event of a traditional data breach, passwords must be changed immediately. However, your biometric features remain constant and unique. This technology provides a robust, future-proof layer of protection that is increasingly trusted by global banking systems.

CHALLENGES AND RISKS OF BIOMETRICS

- **Irreversible data theft:** Unlike a PIN or password, you cannot "reset" your biological traits. If biometric data is compromised or stolen by hackers, it cannot be changed. This creates a unique long-term security risk, as your iris pattern or fingerprints are permanent.
- **Calibration and recognition errors:** Even advanced systems, such as facial or voice recognition, require precise calibration. Systems can occasionally fail due to external factors like poor lighting, wet hands, or damaged skin on the fingertips. In such cases, the authentication process can be hindered or denied.
- **Need for fallback systems:** biometric technology is not yet 100% foolproof. Due to potential technical glitches or identification failures, it is still necessary to have traditional backup methods, such as a PIN or password. This means biometrics are currently an enhancement, not a total replacement for traditional security.

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KRAKOW UNIVERSITY OF ECONOMICS

Anna Ponicka
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ROBOTIC PROCESS AUTOMATION (RPA) IN FINANCIAL AND CONTROLLING PROCESSES IN ENTERPRISES

INTRODUCTION

Robotic Process Automation is increasingly used in financial management and controlling systems.
It enables the automation of repetitive, rule-based tasks, improves data accuracy, and supports managerial decision-making.

IMPACT OF RPA ON MANAGEMENT EFFECTIVENESS

- faster access to reliable information
- reduction of operational costs
- improvement of process efficiency
- real-time monitoring of financial performance
- better support for strategic and operational decisions

EXAMPLES OF RPA APPLICATIONS IN CONTROLLING

- automated posting of accounting documents
- automatic generation of financial and management reports
- budget monitoring and variance detection
- invoice data extraction and validation
- reconciliation of accounts and data verification

BEFORE VS AFTER RPA

TRADITIONAL CONTROLLING

- manual data entry
- time-consuming reporting
- higher risk of errors
- delayed decisions

CONTROLLING WITH RPA

- automated processes
- real-time reporting
- higher data reliability
- faster decision-making

CHALLENGES AND RISKS

- implementation and maintenance costs
- dependence on IT infrastructure
- need for employee reskilling
- risk of process rigidity and system failures

CONCLUSION

RPA does not replace financial controllers but transforms their role. By automating routine tasks, it allows professionals to focus on analysis, planning, and strategic decision-making, which increases the overall effectiveness of enterprise management.

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Michał Nejranowski
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Smart Living: How Home Automation saves Energy & Time

WHAT IS A SMART HOME?

A smart home is a system of connected devices that communicate with each other and can be controlled remotely —via smartphone, tablet, or voice assistant. With smart home technology, you can manage your lighting, heating, blinds, and even monitor your home's security from virtually anywhere in the world.

WHAT IS A SMART HOME?

- Smart thermostats: the key to comfort and energy efficiency
- Smart security cameras: protecting your space
- Smart door locks: safety and accessibility
- Voice assistants: your smart home hub
- Smart lighting: enhancing ambiance and savings
- Smart plugs: easy automation
- Smart doorbells: know who's at your door
- Smart home hubs: connect and control
- Smart speakers: high-quality audio and voice control
- Smart appliances: making life easier

ADVANTAGES OF SMART HOMES

Energy efficiency:
Intelligent systems can optimize energy use by turning off lights and devices when they're not needed or adjusting climate control based on room occupancy. This is good for both the environment and your bills.

Greater security:
Surveillance cameras, motion sensors, and smart locks add an extra layer of protection. You can monitor your home remotely and receive real-time alerts about suspicious activity.

Comfort and automation:
Imagine your coffee machine starting to brew your favorite coffee when you wake up, or your blinds adjusting automatically based on natural light. The possibilities are endless.

Accessibility:
For people with reduced mobility or disabilities, voice control and automation can make everyday life much easier.

5 MOTIVATIONS FOR PURCHASING SMART HOME DEVICES

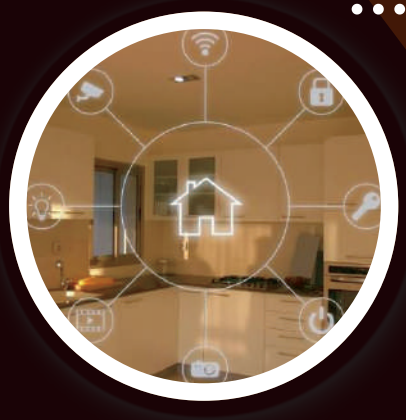
Convenience
Saving time, reducing effort and automating routines

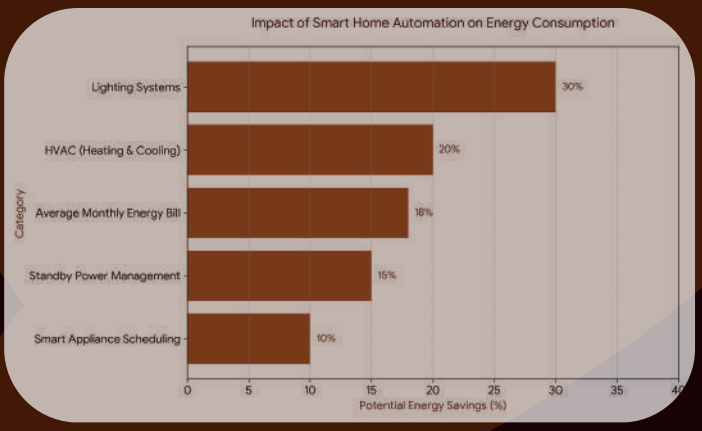
Safety and Peace of Mind
Knowing home is secure and being able to monitor and respond promptly

Saving resources and money
Optimizing energy use, prevent waste and cut unnecessary cost

Tracking home data
Providing actionable insights and clear data visualization to support decision-making

Mood and ambiance
Shaping spaces to reflect moods and enhance comfort





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SMART LIVING: HOW HOME AUTOMATION SAVES ENERGY & TIME

Michał Nejranowski, Dominik Przepolski, Mateusz Ślęczka

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Stagnation or growth?

Upskilling and reskilling as survival strategies in the era of AI.

Aneta Paprocka
Edyta Puchała
Julia Sobolewska

"The future belongs to those who learn, unlearn, and relearn."

Wayne Mansfield

The development of artificial intelligence (AI) is transforming the way we work, learn, and plan our careers. The automation of a growing number of processes, the growing importance of data, and the need for professional flexibility mean that traditional approaches to acquiring qualifications are no longer sufficient. Two concepts are becoming increasingly important: **upskilling** and **reskilling**. Both represent the development of competencies, but they lead to different outcomes. What allows us to better prepare for the future of a labor market increasingly dominated by AI is to properly recognize when it's worth investing in which of them.

The aim of our poster is to show how important and future-oriented the roles of upskilling and reskilling are. They are especially important in the era of AI and rapid technological development.

VS

Upskilling refers to the practice of acquiring new skills or enhancing existing skills to stay competitive in the job market. Upskilling is specifically focused on obtaining knowledge, expertise, or capabilities related to your current field or industry in order to advance your career or adapt to changes in the job market.

Reskilling refers to the acquisition of entirely new skills. Reskilling is often pursued to pivot to a different career or industry due to changes in job demand or personal career goals. It can also be initiated by an organization to shift an employee's responsibilities to help meet their changing goals.

Aspect	Upskilling	Reskilling
Objective	Enhance current skills for role progression	Train for new roles or career changes
Trigger	Industry evolution, role advancement	Job displacement, business restructuring
Examples	Learning advanced coding for IT specialists	Training factory workers for logistics
Employer Benefit	Improved retention and engagement	Talent redeployment and cost savings
Employee Benefit	Increased career growth opportunities	Access to new career paths

Why reskilling and upskilling are essential?

- **Keeping Up with Technological Advances:** As technology reshapes many industries, employees need to learn new skills to remain effective in their roles.
- **Improving Job Satisfaction and Retention:** Employees who feel they have growth opportunities are more likely to stay with the company.
- **Supporting Career Growth:** By offering reskilling and upskilling opportunities, companies help employees reach their full potential and prepare for new roles, either within their current area or in a different part of the organization.
- **Building a Flexible Workforce:** With a skilled and adaptable workforce, organizations are better prepared to adjust to market changes, making them more resilient and competitive.

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STAGNATION OR GROWTH? UPSKILLING AND RESKILLING AS SURVIVAL STRATEGIES IN THE ERA OF AI

Aneta Paprocka, Edyta Puchała, Julia Sobolewska

KRAKOW UNIVERSITY OF ECONOMICS

NIKOLA PACH
JULIA ZAITZ

SUSTAINABILITY CONTROLLING AS A TOOL FOR BUILDING COMPETITIVE ADVANTAGE

1. Research problem

Companies face increasing pressure from regulations, investor expectations, and climate-related threats. The traditional approach to controlling ignores these factors, which leads to missed opportunities and exposes companies to risk.

2. What is Sustainability Controlling?

Sustainability controlling extends traditional business controlling by incorporating environmental, social, and governance (ESG) factors into management processes.

3. Competitive Advantage

Companies reduce costs, attract environmentally customers and investors, and introduce innovations more quickly. They build resilience to regulatory and reputational risks, gaining a long-term advantage over their competitors.

4. Challenges it brings

Organizations face difficulties related to ESG data quality, complex reporting requirements, and the integration of sustainability into existing management systems.

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SUSTAINABILITY CONTROLLING AS A TOOL FOR BUILDING COMPETITIVE ADVANTAGE

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THE IMPORTANCE OF FINANCIAL REPORTS IN COMPANIES

BACKGROUND

Financial reports are essential tools that present the financial position and performance of a company. They provide structured and standardized information about revenues, expenses, assets, and liabilities. These reports are used by managers, investors, and other stakeholders to evaluate a company's performance and make informed decisions. Financial reporting also ensures transparency and accountability in business operations.

THE OBJECTIVE

The objective of this poster is to explain the importance of financial reports in companies and their role in supporting business decision-making.

SIGNIFICANCE OF FINANCIAL REPORTS

Financial reports play a crucial role in business operations because they:

- support effective decision-making processes,
- provide information on company performance and profitability,
- help investors and stakeholders evaluate financial condition,
- ensure transparency and accountability in business activities,
- support financial planning and budgeting,
- facilitate compliance with legal and regulatory requirements.

They are essential for both internal management and external users, enabling better understanding and control of a company's financial situation.

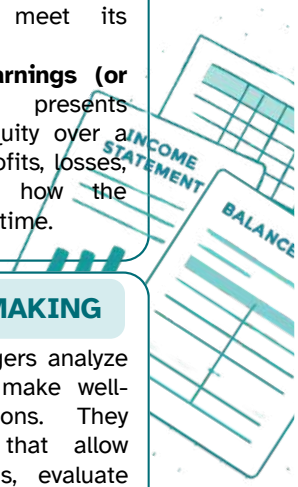
KEY FINANCIAL REPORTS

Income Statement – presents a company's revenues, expenses, and profit over a specific period, helping to evaluate financial performance and its ability to generate earnings.

Balance Sheet – presents the financial position of a company by showing its assets, liabilities, and equity at a given point in time, providing a clear overview of what the company owns and owes.

Cash Flow Statement – presents the inflows and outflows of cash, helping to assess a company's liquidity, financial stability, and ability to meet its obligations.

Statement of Retained Earnings (or Shareholders' Equity) – presents changes in a company's equity over a period, including retained profits, losses, and dividends, indicating how the company's value evolves over time.

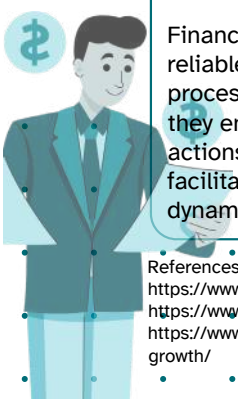


ROLE IN DECISION-MAKING

Financial reports help managers analyze company performance and make well-informed strategic decisions. They provide detailed insights that allow businesses to control costs, evaluate investments, and plan future activities more effectively. In addition, accurate and timely financial data enables companies to respond quickly to market changes, reduce risks, and improve overall operational efficiency.

CONCLUSION

Financial reports constitute a fundamental element of modern business management. They provide reliable, structured, and comparable information that supports effective decision-making processes, enhances transparency, and improves overall organizational performance. Moreover, they enable managers to monitor financial results, identify potential risks, and implement corrective actions in a timely manner. In addition, financial reports play a crucial role in long-term planning, facilitating strategic management and supporting the achievement of organizational objectives in a dynamic and competitive business environment.



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KRAKOW UNIVERSITY OF ECONOMICS

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Monika Urban
Paulina Tokarczyk

Understanding data visualization

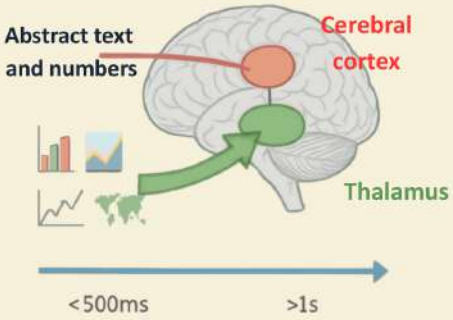
From Perception to Patterns

How cognitive constraints of the brain impact the effectiveness, clarity, and correct interpretation of data visualization.

What is data visualization?

Data visualization is the practice of translating complex information into a visual format, such as charts, graphs, or maps, to make data easier to interpret. By converting raw numbers into a graphical context, it enables viewers to instantly identify key trends, recurring patterns, and statistical anomalies that might otherwise remain hidden in a spreadsheet.

Why our brains prefer pictures over numbers?



What are the benefits of data visualization?

Narrative Impact
Patterns and colors allow to capture attention and visualize the story hidden within the figures

Universal Accessibility
Transforming complex statistics into visual formats, information becomes more inclusive

Visualize relationships
Representing data through graphs and charts makes it easier to show and spot patterns within a data set

Principles of data visualization

Gestalt principles describe the brain's tendency to find order in chaos. The theory suggests that when people encounter a complex arrangement of various elements, mind subconsciously organize them into a coherent system rather than seeing them as isolated parts.

Law of Closure
The brain subconsciously fills gaps to see incomplete images as whole, recognizable figures

Law of Similarity
The brain subconsciously groups elements with similar visual traits

Law of Enclosure
Elements within a shared boundary are seen as a connected group

Law of Continuity
The eye naturally follows lines or curves, seeing them as continuous paths

Law of Figure-Ground
The brain subconsciously separates visual elements into foreground and background

Law of Symmetry
The brain sees symmetrical elements as a single, unified group

Law of Focal Point
Distinctive elements grab attention, forming the viewer's focal point

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UNDERSTANDING DATA VISUALIZATION: FROM PERCEPTION TO PATTERNS

Anastasiya Prylouskaya, Monika Urban, Paulina Tokarczyk

PART IV

Data Security and Digital Trust in the Age of AI

KRAKOW UNIVERSITY OF ECONOMICS

Jakub Szlachta
Katazhyna Viontsek

AI and the Environment: Innovation with Responsibility

Shaping a Sustainable Future While Managing Our Impact

Environmental Context of AI

Artificial Intelligence is rapidly transforming industries and accelerating innovation worldwide. While it offers powerful tools to combat climate change and protect ecosystems, its growing infrastructure demands vast amounts of energy, water, and raw materials. The environmental future of AI depends on how responsibly we design, power, and regulate this technology today.

Research Objective and Problem

The objective of this poster is to examine the environmental impact of Artificial intelligence and highlight the need for responsible and sustainable AI development. Through our regulatory approaches, energy efficiency and lifecycle analysis on AI systems.

Track Emissions
Monitor climate data and improve environment transparency.

Protect Forests & Ecosystems
Detect deforestation and biodiversity loss in real time.

Improve Energy Efficiency
Optimize grids, transport, and industrial systems.

Support Climate Solutions
Accelerate research and smart sustainability strategies.

High Energy & Water Consumption
Data centers require vast electricity and cooling resources.

Critical Mineral Extraction
AI hardware depends on resource-intensive mining.

Growing Electronic Waste
Rapid hardware upgrades increase e-waste worldwide.

Rising Environmental Footprint
Without regulation and renewable energy.

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KRAKOW UNIVERSITY OF ECONOMICS

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Izabela Wrona

AI AS DIGITAL NOMAD'S PERSONAL ASSISTANT

Artificial Intelligence supporting remote lifestyle

INTRODUCTION

Digital nomads are people who work remotely while traveling and rely on technology to stay connected and productive. AI tools can act as personal assistants by helping manage schedules, communication, tasks, and travel planning, allowing them to work efficiently from anywhere in the world.

EXAMPLE AI TOOLS

- Chat assistants (ChatGPT, Claude)
- AI scheduling tools (Motion)
- Travel AI planners (Tripnotes, GuideGeek)
- Note-taking AI (Notion, Obsidian)
- Translation AI (Google Translate , DeepL)

WHO IS A DIGITAL NOMAD?

- Works remotely
- Travels frequently
- Uses digital tools daily
- Often works across time zones
- Values flexibility and independence

KEY AREAS WHERE AI HELPS

TRAVEL PLANNING

- Find flights and accommodation
- Suggest destinations
- Create travel itineraries

TIME & TASK MANAGEMENT

- Organizes schedules
- Sets reminders and deadlines
- Adjust meetings across time zones

COMMUNICATION

- Translates languages in real time
- Helps write emails and messages
- Improves global communication

PRODUCTIVITY

- Generates ideas and content
- Summarizes documents
- Helps manage projects and tasks

RISK CHALLENGES

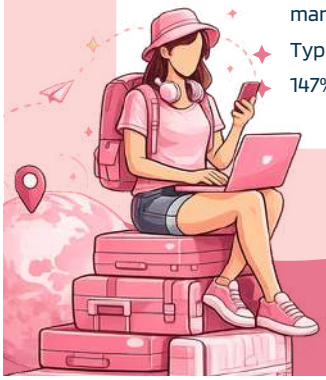
- Internet dependence
- AI hallucinations (mistakes and incorrect informations)
- Data privacy concerns
- Over-reliance on technology
- Costs of some AI tools

DATA/STATISTICS

- 35-40 milion digital nomads worldwide
- Mostly Millennials & Gen Z, median age 37
- 90% highly educated, many in tech & marketing
- Typical income: $50k-$125k/year
- 147% growth in US digital nomads (2019-2024)

FUTURE OUTLOOK

- AI assistants will become more advanced
- Smarter productivity tools
- Better automation and travel planning
- Improved and more convinient real-time translation
- More people choosing the digital nomad lifestyle



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AI AS DIGITAL NOMAD'S PERSONAL ASSISTANT
Dominika Tomczak, Izabela Wrona

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Karol Spyrka
Katarzyna Zając
Natalia Oleszczyńska

AI IN TRAVEL PRICING

Artificial Intelligence and Business Intelligence systems are increasingly used to analyze large datasets and support predictive controlling and revenue management decisions. These technologies allow companies to forecast demand and adjust prices in real time to maximize revenue and occupancy rates.

Źródło: https://codiant.ai/blog/smart-ai-trip-planner-app-development-guide/

Źródło: https://codiant.ai/blog/smart-ai-trip-planner-app-development-guide/

According to SiteMinder's global "Changing Traveller Report 2026," based on a survey of 12,000 travellers from 14 countries, 80 % of respondents are willing to use AI-powered tools when choosing travel services. They most often expect support in monitoring travel costs (44%), comparing prices, and receiving alerts about price changes. AI is also seen as a tool that can help tailor offers to individual health or accessibility needs.

1. **Dynamic Pricing Adjustments**
   AI adjusts prices in real-time based on market conditions and demand.

2. **Optimal Booking Timing**
   AI analyzes price patterns and predicts the best times to book flights and accommodations at the lowest prices.

3. **Personalized Offers**
   AI tailors special offers and discounts based on individual user behaviour and preferences.

4. **Competitive Advantage**
   Travel companies using AI gain a competitive edge by offering the best deals to attract more customers.

5. **Price Trend Analysis**
   AI analyzes historical and real-time data to identify trends and forecast optimal prices.

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Sandra Stępień
Zuzanna Twardosz

USING ARTIFICIAL INTELLIGENCE IN BUSINESS

SECURITY AND RISK

Network monitoring, anomaly detection, and automated threat response using AI

CUSTOMER SERVICE AND SALES

Chatbots and voicebots automate customer contact, answer questions, process requests, and reduce the workload of call center teams.

LOGISTICS

Predicting demand and automatic replenishment of stocks. AI selects the most efficient routes, reducing costs.

MARKETING

Generating product descriptions, posts, and ads. AI detects trends and groups customers based on behavior, which allows you to run more precise marketing campaigns.

FINANCE & CONTROLLING

Models learn from historical data and predict financial outcomes. AI supports reporting and detects anomalies and errors in financial data.

HR

AI-powered recruitment through Revenue analysis, candidate matching, and initial interviews via recruitment chatbots. analyzes competencies and suggests training paths.

Models learn from historical data and predict financial outcomes. AI supports reporting and detects anomalies and errors in financial data.
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Copailot

ARTIFICIAL INTELLIGENCE IN BUSINESS FUNCTIONS

Sandra Stępień, Zuzanna Twardosz

KRAKOW UNIVERSITY OF ECONOMICS

Mikołaj Tuz
Kacper Wilk

THE RISE OF AUTONOMOUS SYSTEMS: FROM DRONES TO SELF-DRIVING CARS

Autonomous systems are technologies capable of performing tasks without direct human control. Recent developments in Artificial Intelligence (AI), sensor technology, and computing power have significantly accelerated the development of autonomous vehicles and drones.

The objective of this poster is to demonstrate how artifical inteligence automation can make life easier and possibly safer.

Autonomous Drones in Delivery Services

Autonomous drones represent another rapidly developing field of AI-based technology. Many companies are exploring the use of drones for package delivery, especially in urban areas and remote locations. AI enables drones to navigate autonomously by using computer vision, GPS navigation, and obstacle-avoidance algorithms. These technologies allow drones to determine the most efficient flight path, detect obstacles, and safely deliver packages to designated locations. Drone delivery systems may significantly reduce delivery times, improve logistics efficiency, and decrease traffic congestion in cities.

Artificial Intelligence in Self-Driving Cars

Artificial Intelligence plays a key role in autonomous vehicles. Self-driving cars use machine learning, computer vision, and sensor fusion to process data from cameras, LiDAR, radar, and GPS. These technologies help detect objects, recognize traffic signs, and identify pedestrians. Autonomous systems include three main components: perception, decision-making, and control, which together allow vehicles to analyze their environment, plan routes, avoid obstacles, and execute actions such as braking or steering.

Benefits of Autonomous Systems

The development of autonomous vehicles and drones offers numerous advantages: increased transportation safety by reducing human error faster and more efficient logistics and delivery services reduced traffic congestion improved accessibility in remote or difficult-to-reach areas potential reduction in transportation costs. Autonomous technologies may also contribute to the development of smart cities and more efficient transportation networks.

Challenges and Future Development

Despite their potential, autonomous systems still face several challenges. Safety, cybersecurity, legal regulations, ethical decision-making and public trust remain key issues. Autonomous vehicles must operate reliably in complex and unpredictable environments, which requires further advancements in AI algorithms and sensor technology. Researchers continue to work on improving perception systems, motion planning algorithms, and communication technologies to make autonomous systems safer and more reliable in the future.

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Graphics made with gemini 3

ARTIFICIAL INTELLIGENCE IN SELF-DRIVING CARS AND AUTONOMOUS DRONES IN DELIVERY SERVICES

Mikołaj Tuz, Kacper Wilk

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Kinga Sorota
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Artificial Intelligence in the Tea Industry

Applications in **Agriculture, Processing and Quality Control**

Precision Agriculture with AI

Precision agriculture uses artificial intelligence and modern technologies to enhance crop management and improve farming efficiency. In tea cultivation, AI-powered drones and sensors are increasingly used to monitor plantations. For example, in Assam, India, tea estates use drones equipped with multispectral cameras to capture detailed images of the fields. These images help identify plant health problems, detect diseases, and assess soil conditions. The data is then analyzed using machine learning algorithms, providing farmers with valuable insights. This allows them to make more informed decisions about irrigation, fertilization, and pest control, resulting in healthier plants and increased tea production.

Fermentation Monitoring with AI

Fermentation is a key stage in tea processing that strongly influences the tea's flavour and aroma. Traditionally, this stage has been monitored manually, which can lead to inconsistencies. Artificial intelligence is improving this process by enabling real-time monitoring and control.

In some tea factories in China, AI-based sensors are used to track conditions such as temperature, humidity, and gas composition during fermentation. The collected data is analyzed by machine learning algorithms, helping optimize fermentation conditions and ensure consistent flavour and quality in each batch of tea.

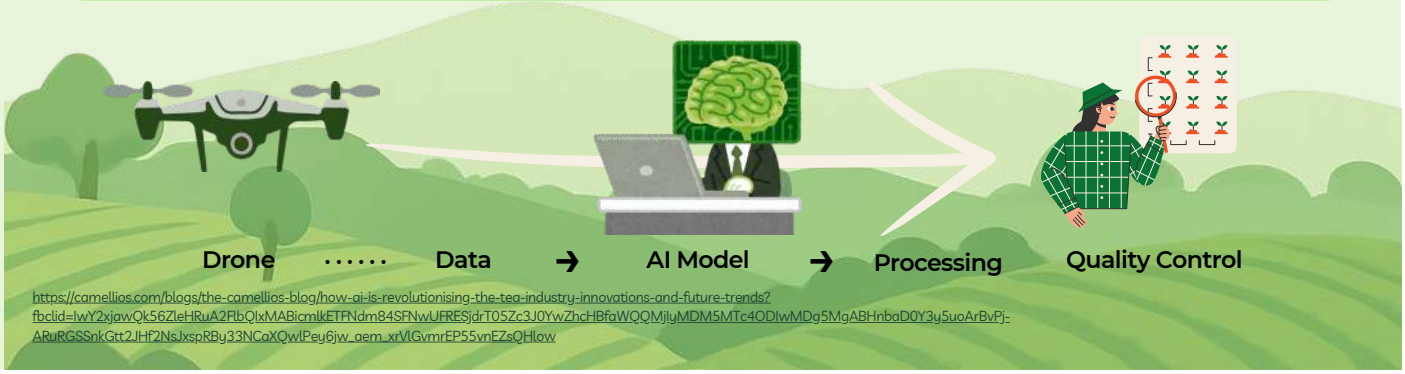
Quality Control with Machine Learning

Ensuring consistent quality in tea processing is a significant challenge that has traditionally depended on the expertise of skilled tea tasters. Today, AI enhances this process by introducing more objective and precise quality control methods.

For example, AI-powered optical sorting machines used in tea factories analyze the colour, shape, and size of tea leaves using machine learning algorithms. This not only accelerates the sorting process but also improves the consistency and overall quality of the final product.

The Future of AI in the Tea Industry

As artificial intelligence continues to develop, its role in the tea industry is expected to grow. Advanced robots equipped with AI and machine vision could automatically select and harvest high-quality tea leaves, improving efficiency and reducing labour costs. AI may also be integrated with blockchain technology to improve product traceability, allowing companies to provide transparent information about the origin and production of tea, which can increase consumer trust.



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ARTIFICIAL INTELLIGENCE SECURITY

The goal of this poster is to educate stakeholders on the dual role of artificial intelligence in cybersecurity by distinguishing between protecting AI infrastructures from manipulation and leveraging AI capabilities to automate threat detection and organizational defense.

What is IA security

AI security is a strategic framework designed to automate and enhance an organization's defense mechanisms. By integrating machine learning and advanced pattern recognition, it allows for constant monitoring of network behaviors and the creation of precise security baselines. This proactive approach identifies anomalies in real-time, enabling security teams to neutralize sophisticated threats and data breaches before they escalate. Modern systems also utilize large language models to simplify complex data into actionable insights for faster decision-making.

Securing AI vs. Using AI for security

Digital protection in the age of artificial intelligence is divided into two fundamental areas. AI security focuses on the integrity of the models themselves, protecting algorithms and datasets from external manipulation such as data poisoning or adversarial attacks. In contrast, AI for cybersecurity involves deploying intelligent tools to monitor and defend the entire corporate infrastructure. While the former ensures that the AI functions correctly without being compromised, the latter uses that intelligence to identify risks and automatically block malicious activities across the digital environment.

AI security is essential because artificial intelligence systems process large amounts of sensitive data and are increasingly integrated into critical digital infrastructures. If these systems are compromised, attackers can manipulate models, steal data, or disrupt automated decision-making processes. Protecting AI systems therefore helps ensure the reliability, integrity, and safe deployment of artificial intelligence technologies.

Future Trends Shaping AI Security

Quantum-resistant AI security – new cryptographic methods are being developed to protect systems from potential future attacks using quantum computing.

Federated security models – organizations collaborate and share threat intelligence while keeping sensitive data private.

AI supply chain security – increasing attention is being given to securing the components, datasets, and third-party models used to build AI systems.

Regulatory development – governments and international organizations are introducing regulations and standards to ensure responsible and secure use of AI technologies.

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Martyna Rojek

BI: DECISSIONS BASED ON FACTS, NOT INTUITION

Introduction:

In a rapidly changing business environment, relying on gut feelings is no longer enough. Business Intelligence (BI) empowers organizations to transform raw data into actionable insights, ensuring that every strategic move is backed by solid facts.

Purpose of the poster:

This poster aims to demystify Business Intelligence by explaining its core concepts, highlighting its competitive advantages, and showcasing the practical tools and applications that drive modern business success.

WHAT IS A BUSINESS INTELLIGENCE ?

Business Intelligence is a comprehensive approach to the manage business information, which involves collecting, processing and analyzing data from different sources. Through to advanced algorithms and analytical tools, BI system transform data to clarify reports, dashboards and visualizations. Thanks to BI, management team receives a clear view on situation of company- from sales scores to effectiveness of internal processes.

BI TOOLS DATA PRESENTATION FORMATS:

- **Management dashboards:** These are personalized, dynamic panels that gather the most important metrics and goal progress in one place.
- **Automated reporting systems:** They generate clear, easy-to-read reports that can be instantly shared across the entire organization.
- **Interactive visualizations:** BI tools transform raw data into accessible graphic formats - such as charts and heat maps - that make it easier to identify significant patterns.
- **Automated alerts:** They allow users to set alarm thresholds (e.g., when budget limits are exceeded) that automatically notify them before the issue affects the company's profitability.

WHY BI IS SO MUCH IMPORTANT FOR A COMPANY THESEDAYS ?

Organizations which use a business analytic, could make decisions quicker and more accurate than others based only on intuition. Reports show that companies which use BI, achive higher incomes and better productivity compared to these companies which don't use this type of technology.

BENEFITS OF BUSINESS INTELLIGENCE:

- Better understanding of customer needs,
- Possibility to optimize operating costs,
- Quicker decision-making thanks to having access to the reliable data,
- Growth in effectiveness of marketing and sales activities.

PRACTICAL APLICATIONS OF BI SYSTEMS:

- **Competitor analysis and monitoring**: BI systems are used to track market trends based on data from social media or price comparison websites.
- **Personalizing the customer experience:** Analytical tools build precise customer profiles based on their purchase history and interactions.
- **Performance tracking and cost control:** BI is used to continuously monitor key performance indicators (KPIs) and compare them with industry standards.
- **Early detection of market opportunities:** Instead of relying on guesswork, companies use analytics of current and historical data to quickly identify new trends, allowing them to stay ahead of the competition.

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Oliwia Smosna
Dominika Węglarz
Emilia Staszak

ChatGPT REVOLUTION IN HUMAN–AI COMMUNICATION

How Is It Changing Our Lives?

ChatGPT is an advanced language model created by OpenAI that uses artificial intelligence to understand and generate text in multiple languages. It can answer questions, explain complex topics, assist with writing, translating and editing, as well as generate ideas or stories. It is not human - it has no consciousness, emotions, or personal opinions, but operates based on data and language patterns it was trained on. Its purpose is to provide clear, logical, and useful responses tailored to the user's needs.

Time management - AI creates meal plans, weekly schedules, organizes to-do list

ChatGPT can create recipes based on ingredients the user has in the fridge, which helps reduce food waste.

Explains complex topics in depth and supports the learning process.

ChatGPT helps with translating and breaking language barriers, writing reports and emails, and generating various ideas.

ChatGPT creates personalized itineraries, suggests attractions, and optimizes routes. It helps you tailor your trip to your individual interests, budget, and travel pace.

ChatGPT helps you make purchasing decisions. Thanks to new features, ChatGPT can not only advise you, but also search the web for the best offers.

CHATGPT: HOW IS IT CHANGING OUR LIVES?

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Karol Sukiennik
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Dangers of AI Deepfakes

Due to the rise of AI technologies, the use of deepfakes has become remarkably common. Nowadays, they are appearing everywhere - in social media, news outlets, advertising, entertainment, and even political campaigns.

The aim of the poster is to expose dangerous side of AI deepfakes, despite it's innocent appearance in today's social media for entertainment purposes.

INTRODUCTION

Artificial intelligence (AI) is technology simulating human intelligence by IT systems. These systems gain their strength from examining extremely large datasets and identifying patterns that people might overlook. As AI-generated content and synthetic media continue to spread, along with the growing circulation of AI-driven misinformation, educational institutions are rapidly working to create advanced detection technologies and strengthen media literacy initiatives.

DEFINITION OF A DEEPFAKE

Deepfakes depicts videos, images and audio created using artificial intelligence (AI) to realistically simulate or fabricate content. They are becoming increasingly accessible, as tasks that once demanded advanced software and technical expertise can now be accomplished using free mobile apps and basic digital skills. They are also becoming more advanced and difficult to detect, particularly in the case of audio deepfakes.

TYPES OF DEEPFAKES

- Video deepfakes
- Audio deepfakes
- Image deepfakes
- Text based deepfakes
- Real-Time (Live) deepfakes

CONSEQUENCES IN FINANCE

Deepfakes stand as a threat towards financial institutions and markets, creating a serious problem coming from frauds using false AI generated appearances and voices. These informations may be used to further affect stock markets. By using untruthful depictions of CEO's, politicians or other public figures can cause panic, which can create artificial pricing changes. Furthermore, average clients of financial institutions are exposed to those as well, by using fake depictions of people to initiate transfer of funds or extract sensitive data, which can be used in another financial frauds.

DANGERES OF DEEPFAKES

Deepfakes carry significant risks when misused. They spread misinformation, produce non-consensual material, facilitate cybercrimes, and erode trust in digital content. Misuse of deepfake technology includes financial crimes, extortion, harassment, etc. Children are especially vulnerable, as their cognitive development makes it harder for them to recognize deepfakes, which are growing increasingly realistic and convincing.

HOW TO PROTECT YOURSELF AGAINST DEEPFAKES

-Pay attention to details – deepfake videos might have irregular facial expressions, lip-sync errors or gestures that seem robotic. Deepfake images may have unnatural smudging around facial edges, hair, etc.
-Check the source – rely on information from reliable sources. Verify content that is questionable using fat-checking tools such as Google Reverse or Reuters Fat Check

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Open AI – Chat GPT

KRAKOW UNIVERSITY OF ECONOMICS

Julia Tońska
Patrycja Pożdał
Wiktoria Popek

DEEPFAKE AND GENERATIVE ARTIFICIAL INTELLIGENCE AS NEW THREATS IN COMPANY FINANCIAL PROCESSES

Introduction

In today's digitalized world, the rapid development of Generative AI and Deepfake technology has introduced unprecedented threats to corporate financial processes. What used to be a reliable verification method - a phone call or a video meeting can now be perfectly faked, leaving traditional financial controls highly vulnerable to manipulation.

Poster purpose

The objective of this poster is to analyze the mechanisms of financial fraud utilizing Deepfake technology and to identify necessary defense strategies aimed at mitigating this risk.

Deepfake examples in enterprises

- Criminals used deepfake technology during a fake video conference, impersonating a company's CFO and other employees. The realistic video convinced the victim to follow the instructions and transfer about $25 million to accounts controlled by the attackers.
- KnowBe4 unknowingly hired a North Korean hacker who impersonated an American identity and used deepfake technology throughout the entire recruitment process, including video interviews and online assessments.
- In another scam, criminals used a deepfake of Rafał Brzoska in a Facebook advertisement for a fake investment platform, showing him promoting "high profits" and encouraging users to register on a suspicious website.

Explanation of terms:

Generative artificial intelligence (GenAI) is a type of artificial intelligence that uses advanced machine learning techniques to create new, realistic content—such as text, images, music, or video—based on previously analyzed data.

Deepfake is an advanced AI technology that generates hyper-realistic, synthetic audio and video. By cloning real identities, it acts as a dangerous manipulation tool, causing severe reputational and financial damage.

How to spot a deepfake?

- Audio-video mismatch
- Robotic pronunciation
- Unnatural movements
- Distorted backgrounds
- Blurred facial edges

Fraud strategy:

1. Data collection
2. AI Preparation
3. Building trust
4. Voice cloning
5. Video deepfake
6. Funds transfer

TOP 3 DEFENSE STRATEGIES:

1. Out-of-Band Verification: Always confirm urgent requests via a second, trusted communication channel.
2. Zero Trust Protocols: Shift from voice/video trust to hardware-based MFA and multi-person approvals.
3. The "Human Challenge": Use personal, non-business questions to verify identity during suspicious video calls.

$25,6M	Record-breaking loss deepfake video scam (Hong Kong, 2024)
24,5%	Human detection rate for high quality videos
8M	Number of deepfakes by 2025
$500k	Average loss

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DEEPFAKE AND GENERATIVE ARTIFICIAL INTELLIGENCE AS NEW THREATS IN COMPANY FINANCIAL PROCESSES
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2026
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Does Diversity Pay Off?

The Impact of Multicultural Teams on Corporate Performance

The Business Value of Multicultural Teams

In today's globalized economy, the **strategic integration** of **multicultural teams** is no longer just a social trend, but a **critical driver** of **superior corporate performance**. Empirical research indicates that **cultural diversity** is not merely a social imperative but a **strong financial engine**. By **bringing together** varied **cultural perspectives** and **experiences**, companies significantly **enhance their innovative capacity** and **make better decisions**. This proves that multiculturalism leads to the **"Diversity Dividend,"** which acts as a direct **link between cultural variety** and **increased profitability**. The following analysis proves that **in 2026**, building an inclusive workplace is a **high-yield investment** that secures a **sustainable competitive advantage** in the global marketplace.

Research Objective & Problem

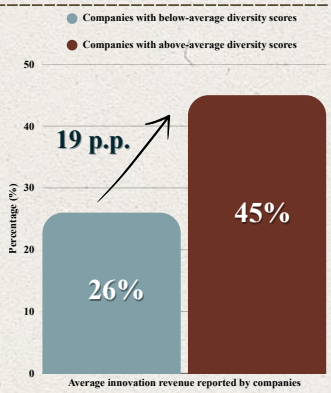
The primary **objective of this poster** is to evaluate the direct correlation between **cultural diversity in team structures** and **measurable corporate financial performance**. The research focuses on identifying whether multiculturalism acts as a **strategic asset** or merely a **social objective.**

Key Benefits of Workplace Diversity

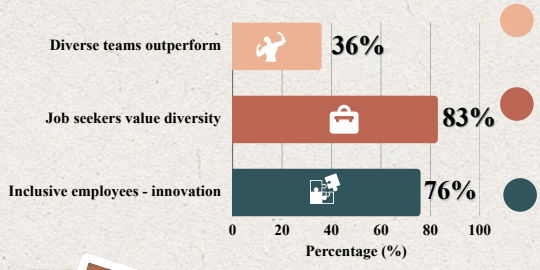
- **Catalyst for Innovation:** different perspectives generate unique ideas and creative solutions
- **Superior decision-making:** broader viewpoints mitigate "groupthinking" and reduce blind spots
- **Global Market Insight:** diverse teams better reflect and understand the needs of international customers
- **Talent attraction & retention**: inclusive cultures build engaged, loyal teams and appeal to top talent

Did you know?

Companies with high leadership diversity report **45%** innovation revenue, compared to just **26%** in less diverse organizations. This **19** p.p. gap proves that diverse perspectives are essential for market-leading innovation



Management diversity vs innovation revenue



Diverse teams outperform
36% higher likelihood of financial outperformance for diverse teams (McKinsey)

Job seekers value diversity
83% higher innovation capacity reported by inclusive employees (Deloitte)

Inclusive employees - innovation
76% of job seekers consider workforce diversity an important factor (Glassdoor)

Key Success Factors

- **Inclusive Leadership:** Actively encouraging participation from all team members to ensure minority voices are heard and valued
- **Cultural Intelligence (CQ) Training:** Educating employees on diverse professional etiquettes and hierarchies to build mutual respect
- **Clear Communication Protocols:** Establishing standardized feedback loops and using accessible language to minimize misinterpretations

Strategic Foundations of Diversity

Cultural diversity in the workplace means **cooperation between employees** from **different countries**, **backgrounds** and **experiences**. In today's global business environment, **multicultural teams** help companies **operate more effectively** in international markets

One of the **key benefits** of **diversity** is **greater innovation** and **creativity**. People with different perspectives generate **new ideas** and develop more **effective solutions** to complex problems. Diverse teams also tend to make **better decisions**, because they consider a **wider range of viewpoints.**

Conclusions

The research shows that **diversity alone does not automatically improve company performance**. Its positive impact depends on **how organizations manage multicultural teams**. When **properly managed**, cultural diversity becomes an **important factor** supporting **adaptability**, **long-term development** and **competitiveness** in a global business environment.

Challenges of cultural diversity

- Risk of minority voices **not being heard** during meetings
- **Different understanding** of professional etiquette and hierarchy
- **Communication barriers** and **misinterpretation** across languages

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KRAKOW UNIVERSITY OF ECONOMICS

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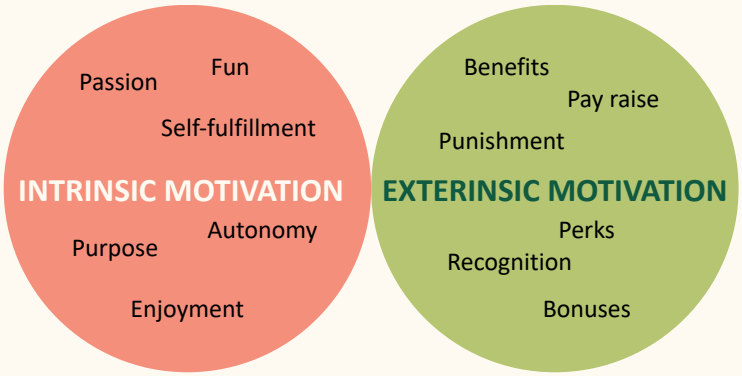
HR CONTROLLING AS A TOOL FOR DESIGNING AND MONITORING EMPLOYEE MOTIVATION SYSTEMS IN MODERN ORGANIZATIONS

HR Controlling supports human resource management by monitoring HR processes and evaluating employee motivation systems. It also highlights the role of motivation tools and digital HR solutions in modern organizations.

The objective of this poster is to analyse how HR Controlling can support the design and monitoring of effective employee motivation systems in modern organizations.

HR controlling is a concept that supports the management of human resources in an organization. It focuses on planning, monitoring, and analyzing HR activities to improve personnel management and the economic efficiency of the company. Its aim is to optimize labor costs and support decision-making related to employees and HR processes. One of the most crucial part of HR controlling is employees motivation.

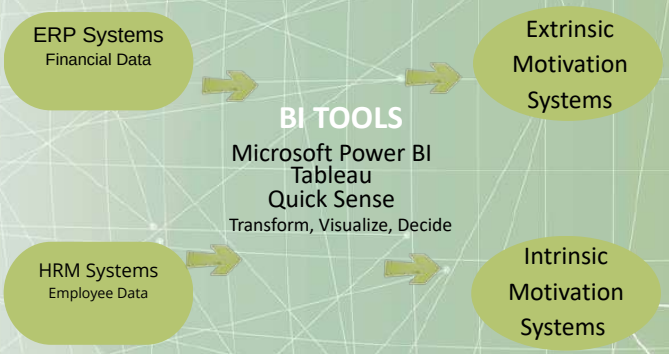


Motivating involves the activation of internal and external factors that stimulate desire and energy in people to be continually interested and committed to a job, role, or subject. It is often categorized into intrinsic motivation (driven by internal rewards) and extrinsic motivation (driven by external incentives). A company management use extrinsic motivation to encourage employees to achieve company's goals.

Effective motivation systems supported by HR Controlling can strengthen organizational culture and improve employee engagement.

Due to digitalisation and automation controllers are able to gather data quickly using diversified technical programs. Not only systems as ERP and HRM are helpful but also Business Intelligence known as BI.

BI is a set of tools used to collect, analyze, and present data to support decision-making in an organization. It helps transform raw data into useful information through reports and visualizations.



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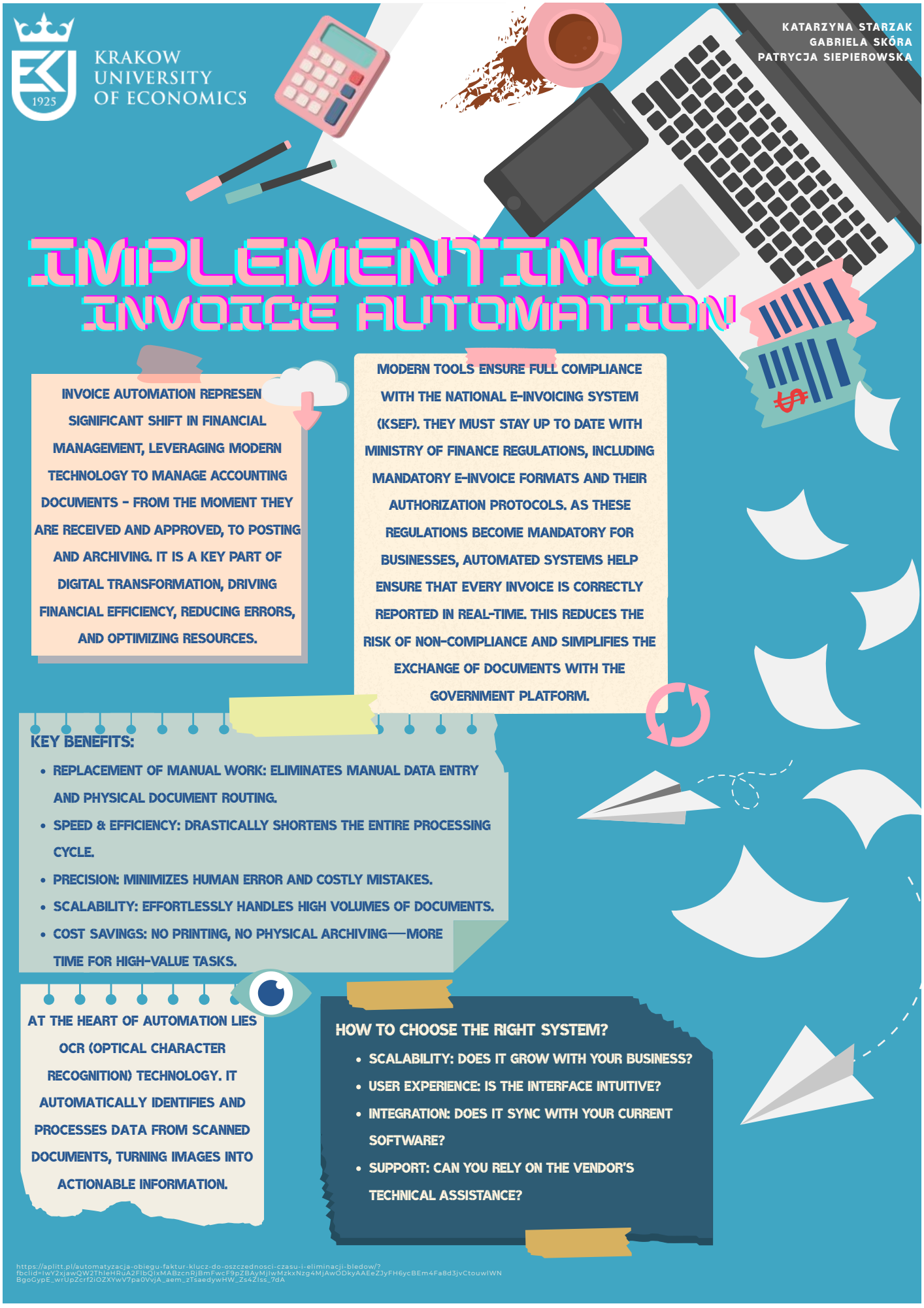

IMPLEMENTING INVOICE AUTOMATION

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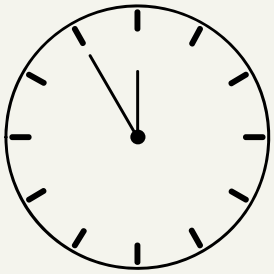
THE 4-DAY WORK WEEK: THE FUTURE OF WORK OR A MAJOR CHALLENGE?

The 4-day work week is a modern model of work organization gaining popularity worldwide. The main premise is to reduce the number of working days from five to four. This can be implemented through two primary models:

Reduced working hours (e.g., 32 hours): 4 days of 8 hours while maintaining the current full salary.

Compressed work week: 4 days of 10 hours (maintaining the standard 40-hour work

In Poland, the Labor Code already allows for shorter working hours through systems such as the shortened work week, task-based work, or individual schedules. Furthermore, the Ministry of Family, Labor, and Social Policy has announced an extensive pilot program involving dozens of companies and public institutions.



CONS AND CHALLENGES

For the employee:

- Higher work intensity
- Financial concerns
- Risk of labor rights violations.

For the employer:

- Costs and staffing shortages
- Industry limitations
- Organizational challenges

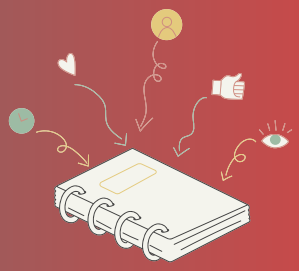
PROS

For the employee:

- Better work-life balance
- Mental and physical health
- Increased satisfaction

For the employer:

- Higher productivity
- Loyalty and lower turnover
- Competitive edge (Employer Branding)



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PART V

Responsible Technology and Sustainable Organizational Value

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Wiktoria Wiśniewska

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ARTIFICIAL INTELLIGENCE IN EDUCATION: OPPORTUNITIES AND THREATS

Artificial intelligence is becoming more common in schools and universities. It can help students learn in a more personal way. For example, AI programs can give extra exercises to students who need more practice and harder tasks to those who learn quickly. AI can also help teachers save time by checking homework and tests.

There are some risks connected with AI in schools. One serious problem is data privacy, because AI systems collect a lot of information about students. Another issue is bias in algorithms, which can sometimes repeat stereotypes or unfair patterns. Students may also become too dependent on AI tools and stop thinking on their own. For this reason, artificial intelligence should be used carefully, with clear rules and ethical guidelines.

In the future, artificial intelligence will probably play an even bigger role in education. Schools may use intelligent systems to plan lessons, monitor student progress, and predict learning difficulties before they become serious problems. AI could also help create interactive learning environments, such as virtual simulations or adaptive online courses, which make learning more engaging and practical. At the same time, it is important to teach students how to use AI in a responsible and critical way. They should understand that AI is a tool that can make mistakes and does not replace human knowledge or values. Proper digital education, teacher training, and clear school policies will be necessary to ensure that artificial intelligence improves the quality of education without reducing creativity, independence, and social interaction among students.

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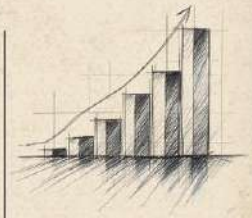
FROM DISTRUST TO DATA: THE MODERN DIMENSION OF REMOTE WORK

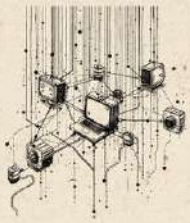
JUSTYNA WITKOWSKA
JULIA PACZUSZKA
EWA OCHMANN

FOR A LONG TIME, REMOTE WORK WAS AN UNPOPULAR PRIVILEGE AVAILABLE ONLY TO A FEW, AND EMPLOYERS APPROACHED IT WITH GREAT UNCERTAINTY. THERE WAS A PREVAILING BELIEF THAT "REAL WORK" ONLY HAPPENED IN THE OFFICE UNDER THE BOSS'S EYE, AS THAT WAS THE ONLY WAY TO CONTROL AN EMPLOYEE. THE PANDEMIC CHANGED EVERYTHING–OVERNIGHT, COMPANIES WERE FORCED TO WORK FROM HOME. ALTHOUGH THE BEGINNINGS WERE DIFFICULT AND FULL OF WORRY, THEY FORCED THE RAPID IMPLEMENTATION OF MODERN TECHNOLOGIES. THANKS TO THEM, REMOTE WORK STOPPED BEING AN "EXPERIMENT" AND BECAME A COMMON STANDARD. TODAY, INSTEAD OF PHYSICAL SUPERVISION, WE RELY ON TRUST AND HARD DATA, ALLOWING US TO WORK EFFICIENTLY FROM ANYWHERE IN THE WORLD.

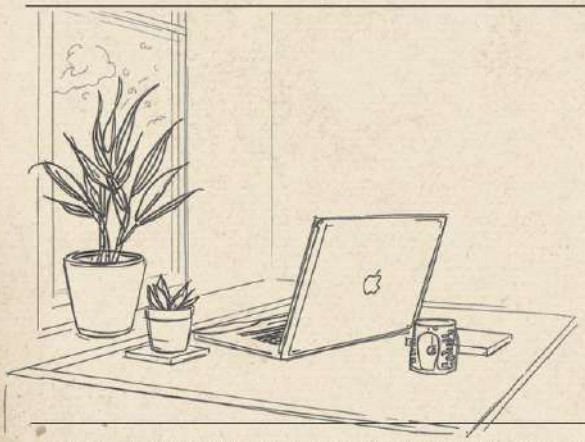
	BEFORE	NOW
EMPLOYER	• LACK OF TRUST IN WORK OUTSIDE THE OFFICE; • DIRECT (VISUAL) SUPERVISION; • HIGH EQUIPMENT COSTS; • RISK OF LOSING COMPANY DATA; • DIFFICULTIES IN TEAM INTEGRATION.	• TRUST CULTURE: WORK FROM ANYWHERE; • MANAGEMENT BY RESULTS AND TASK SYSTEMS; • STANDARD COMPANY EQUIPMENT; LOWER OFFICE COSTS; • SECURITY: ADVANCED SERVER AND CLOUD PROTECTION; • EFFECTIVE COMMUNICATION: ONLINE TOOLS AND CONSTANT CONTACT.
EMPLOYEE	• REMOTE WORK AS A RARE PRIVILEGE; • LIMITED JOB MARKET (REGIONAL ONLY); • WORKING ON PERSONAL OR OUTDATED EQUIPMENT; • LACK OF FLUID ACCESS TO • DATA; • MYTH OF "WORK ONLY IN THE OFFICE."	• STANDARD: FLEXIBILITY AS A CORE PART OF WORK CULTURE; • GLOBAL REACH: ABILITY TO WORK FROM ANYWHERE; • PROFESSIONAL TOOLS: COMPANY LAPTOP AS STANDARD; • MOBILITY: SECURE ACCESS TO RESOURCES FROM ANYWHERE; • RESULTS ARE MORE IMPORTANT THAN PRESENCE.
TECHNOLOGY	• LACK OF TIME MONITORING TOOLS; • DESKTOP EQUIPMENT LIMITED MOBILITY; • COMMUNICATION LIMITED TO EMAILS/PHONE; • NO WAY TO VERIFY PROGRESS.	• SMART WORK: INTUITIVE ACTIVITY MONITORING SYSTEMS; • FULL MOBILITY: MODERN LAPTOPS AND CLOUD-BASED WORK; • MESSENGERS APS LIKE MS TEAMS, VIDEO CONFERENCES; • DATA AND REPORTS: KPIS, REAL-TIME TASK REGISTRATION.





CALL TO ACTION



TRUST THE DATA, NOT THE PRESENCE	*YOUR COMFORT, YOUR EFFECTIVENESS*
• DIGITAL CONTROL, WORK WITHOUT PRESSURE • LOWER COSTS (WATER, ELECTRICITY) = REAL BENEFITS • COMPETENCIES AND EFFICIENCY MATTER	• INDEPENDENCE AND SKILLS DEVELOPMENT • FOCUS AND FLEXIBILITY • NO COMMUTE = TIME FOR YOURSELF

REMOTE WORK IS A STRATEGIC ASSET THAT BUILDS THE IMAGE OF A MODERN COMPANY, PERCEIVED BY CANDIDATES AS AN ATTRACTIVE OFFER BASED ON:

TRUST **MODERNITY** **MARKET ADVANTAGE**

THE FUTURE OF WORK IS NOT A PLACE, IT IS RESULTS. LET'S BUILD IT TOGETHER ON TRUST AND DATA

FROM DISTRUST TO DATA: THE MODERN DIMENSION OF REMOTE WORK

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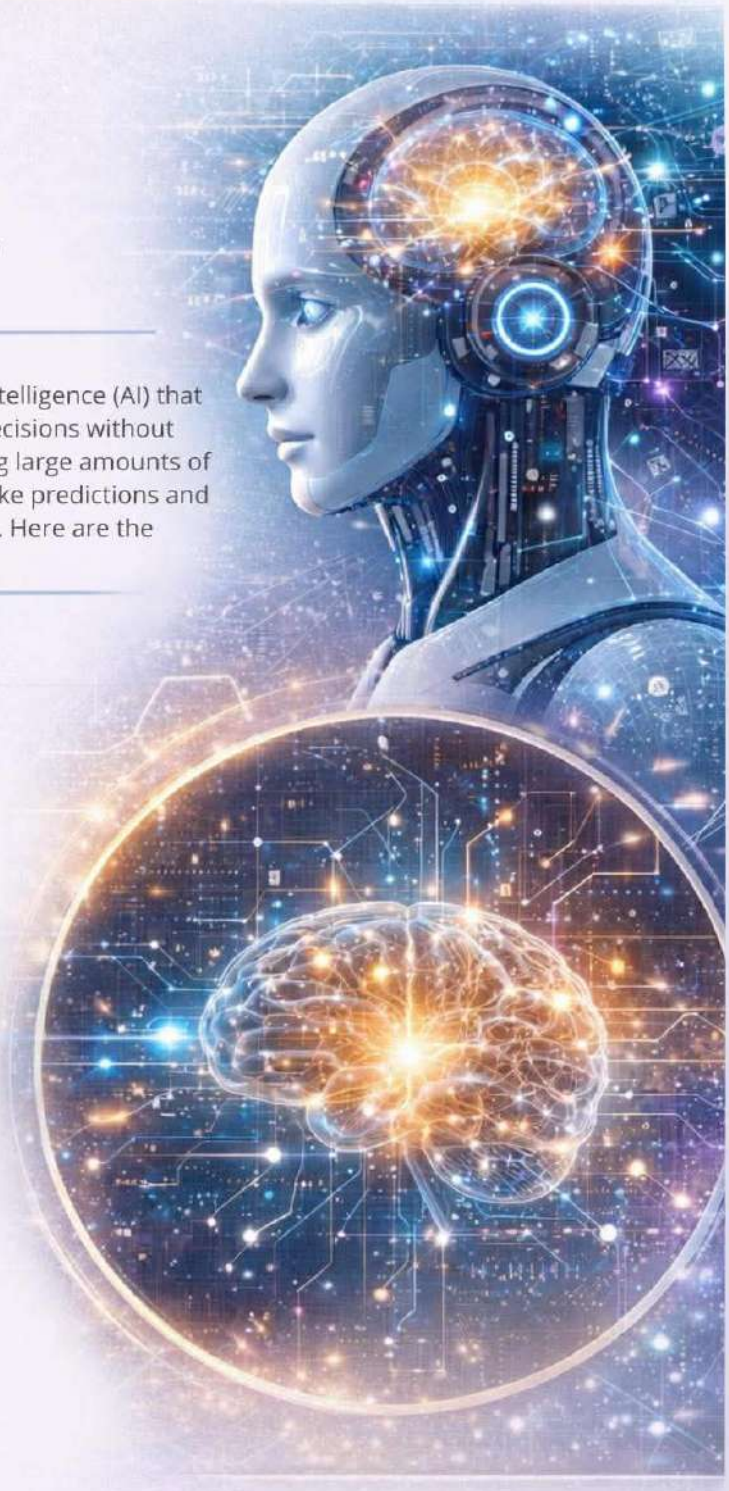
POWER OF MACHINE LEARNING

How computers learn from data



Machine learning is a subset of artificial intelligence (AI) that enables computers to learn and make decisions without being expicitly programmed. By analyzing large amounts of data, machines can identify patterns, make predictions and continuously improve their performance. Here are the concepts in machine learning:

TRAINING DATA

Training data is the backbone of machine learning. This labeled dataset is fed into the system to teach it how to make predictions. The more high-quality data a machine learning model has, the better it can learn to understand new data and improve its accuracy.

TYPES OF MACHINE LEARNING

- **SUPERVISED LEARNING**
  ML models learn from labeled data, identifying patterns and making predictions based on known outcomes.

- **UNSUPERVISED LEARNING**
  ML models analyze unlabeled data to discover hidden patterns, structures, and relationships within datasets.

APPLICATIONS

IMAGE RECOGNITION

ML models can identify faces, objects, and even animals in photos and videos.

CHATBOTS

AI-powered chatbots assist customers by handling basic queries, freeing human specialists for more complex issues.

TRANSLATION

ML enables automated translation of texts using methods like neural networks and hybrid models.

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POWER OF MACHINE LEARNING: HOW COMPUTERS LEARN FROM DATA

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1925

Konrad Tyksiński
Jakub Szkwara
Karol Wojtyło

THE IMPACT OF WORKPLACE --- AUTOMATION --- ON EMPLOYEE WELL-BEING

Comprehensive Introduction

The modern workplace is currently being transformed by the swift advent of STARA and RAISA solutions. They both mark a transition where advanced systems are no longer just subsidiary tools, but integral partners which take over almost 52% of all labor-intensive tasks.

STARA - Smart technology, AI, Robotics, Algorithms
RAISA - Robot, AI, Service Automation

Research Problem

The primary objective of this study is to analyze the dual impact of smart technologies and automation on employee well-being. We will delve into how Artificial Intelligence (AI) and robotics operate as both essential instruments and as a potential risk factors.

THE PARADOX OF BOTH CONCEPTUAL MODELS

BRIGHT SIDE

1 Routine Automation
The automation of recurring activities allows employees to concentrate on more creative and strategic ventures.

2 Performance Augmentation
Both systems operate as professional resources that notably alleviate the physical and mental workload of staff.

3 Safety Compliance
AI systems can actively oversee working conditions and employee well-being, cutting the chance of workplace threats.

DARK SIDE

1 Perceived Job Insecurity
Rapid technological advancement sparks replacement concerns over human and escalating employment volatility.

2 The Techno-strain Phenomenon
Continuous adaptation to emerging technologies and the relentless tempo of machines causes psychological burnout.

3 Workplace isolation
Prioritizing machine interactions over interpersonal relationships weakens team ties and organizational belonging.

CONCLUSION

The crucial key to maintenance employee well-being amidst the rise of automation in today's world is about striking a balance between technological efficiency and human-centric workplace strategies. Achieving a successful digital shift depends on utilizing STARA and RAISA systems as essential resources while proactively minimizing the dangers of displacement and social isolation.

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The Role of Business Intelligence in Controlling

INTRODUCTION

Contemporary enterprises operate in dynamic and uncertain environments, which require modern management methods that support effective decision-making. Controlling is a cross-functional management instrument that integrates planning, control, and information to support managerial decisions. Information and IT systems play a crucial role in this process by enabling the collection, processing, and reporting of data.

Essence of Business Intelligence

Business Intelligence constitutes a class of information systems that support analytical and decision-making processes within an enterprise by transforming data into useful managerial information. In the context of controlling, BI is based on the integration of data originating from various sources, including ERP systems, their processing, and their presentation in the form of multidimensional analyses and reports. These systems enable variance analysis, forecasting, and continuous evaluation of budget execution, thereby strengthening planning and control functions..

The Role of Business Intelligence in a Controller's Daily Work

Business Intelligence tools significantly change the way a controller works by increasing their analytical and advisory role. The focus of the work shifts from routine data processing to advanced analytics that support strategy.

- Support for Planning and Budgeting: BI enables the creation of multidimensional budget structures, variant simulations, and the automatic consolidation of partial budgets.
- Variance Analysis and KPI Monitoring: These tools allow for the immediate detection of differences between plans and actual performance, as well as the real-time tracking of key performance indicators.
- Multidimensional Cost and Revenue Analysis: Using OLAP technology, a controller can "drill down" into data to analyze profitability by product, customer, and profit center simultaneously.
- Visualization and Reporting: The use of management dashboards allows for a clear presentation of trends and variances, which helps management quickly interpret results.
- Forecasting: The use of advanced algorithms allows for the creation of financial forecasts that take into account seasonality and historical trends.

Benefits and Challenges of Using BI

BENEFITS

- **Reporting Automation:** Reduction of manual report preparation and elimination of errors.
- **Faster Decisions**: Instant access to management information in real-time.
- **Greater Transparency**: Easy identification of the causes of variances from established plans.
- **Better Strategic Support**: Ability to choose the optimal budget variant based on detailed analyses.

CHALLENGES

- **Data Quality**: The need to unify inconsistent data from various transactional systems.
- **High Costs**: Significant expenditures on software, infrastructure, and implementation.
- **Employee Competencies**: The need to upgrade analytical skills and learn to use new tools.
- **Security**: The necessity of precisely defining the scope of information accessibility.

Components and Practical Applications of BI

The core elements of BI architecture include data warehouses, ETL processes, reporting modules, and interactive dashboards used to monitor key performance indicators (KPIs). In practice, BI tools comprise dedicated solutions such as Power BI and Tableau, as well as analytical modules integrated with ERP systems, which create an analytical layer over transactional data.

Conclusions

Business Intelligence systems do not replace the controller but transform the nature of their work and strategic importance within the organization. The controller's role evolves from reporting to analytical and advisory functions, strengthening their position as a business partner supporting strategic decision-making. As a result, controlling becomes increasingly data-driven, with greater emphasis on interpreting data and formulating recommendations rather than preparing reports.

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Open AI- Chat GPT

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