

Organizational Behavior

AI and Automation

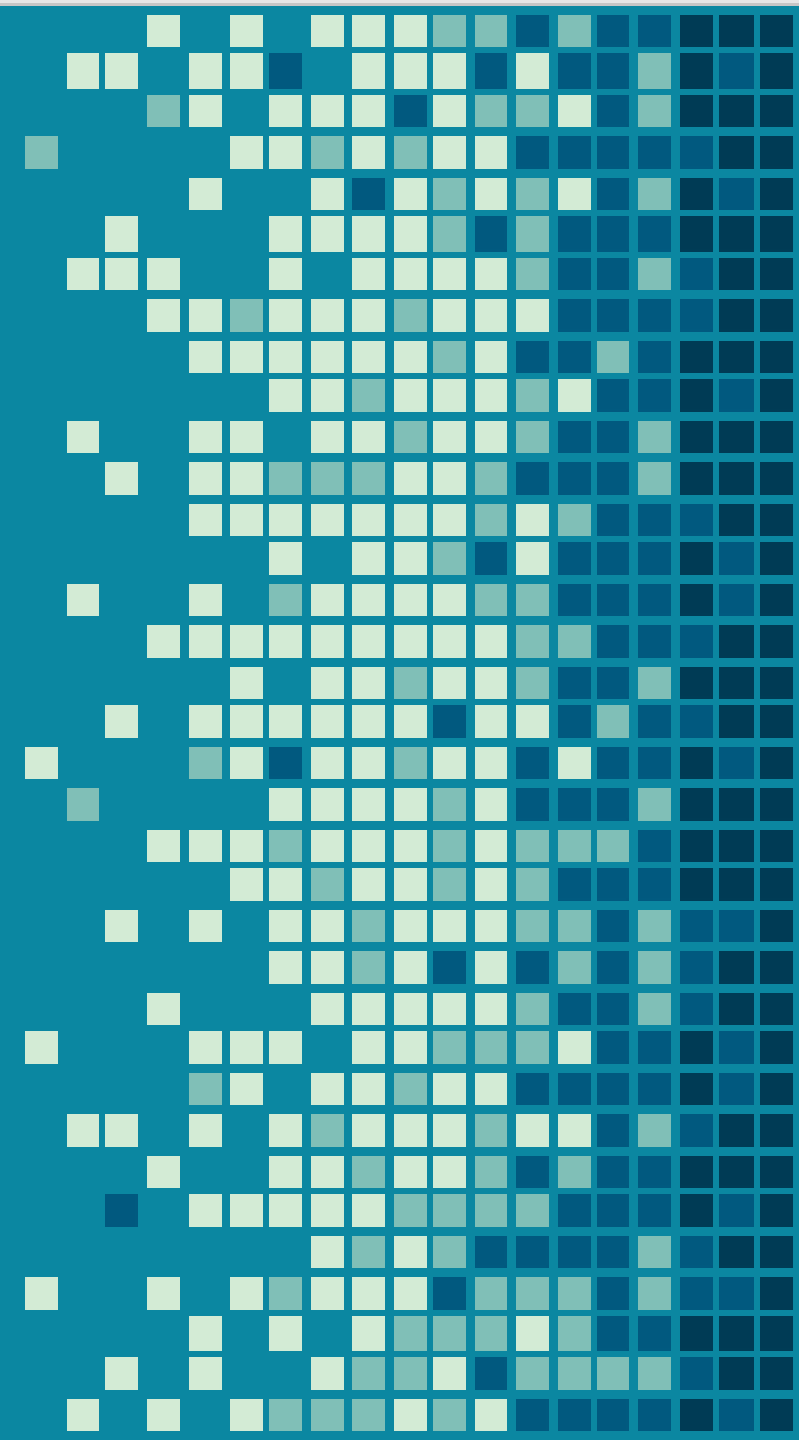
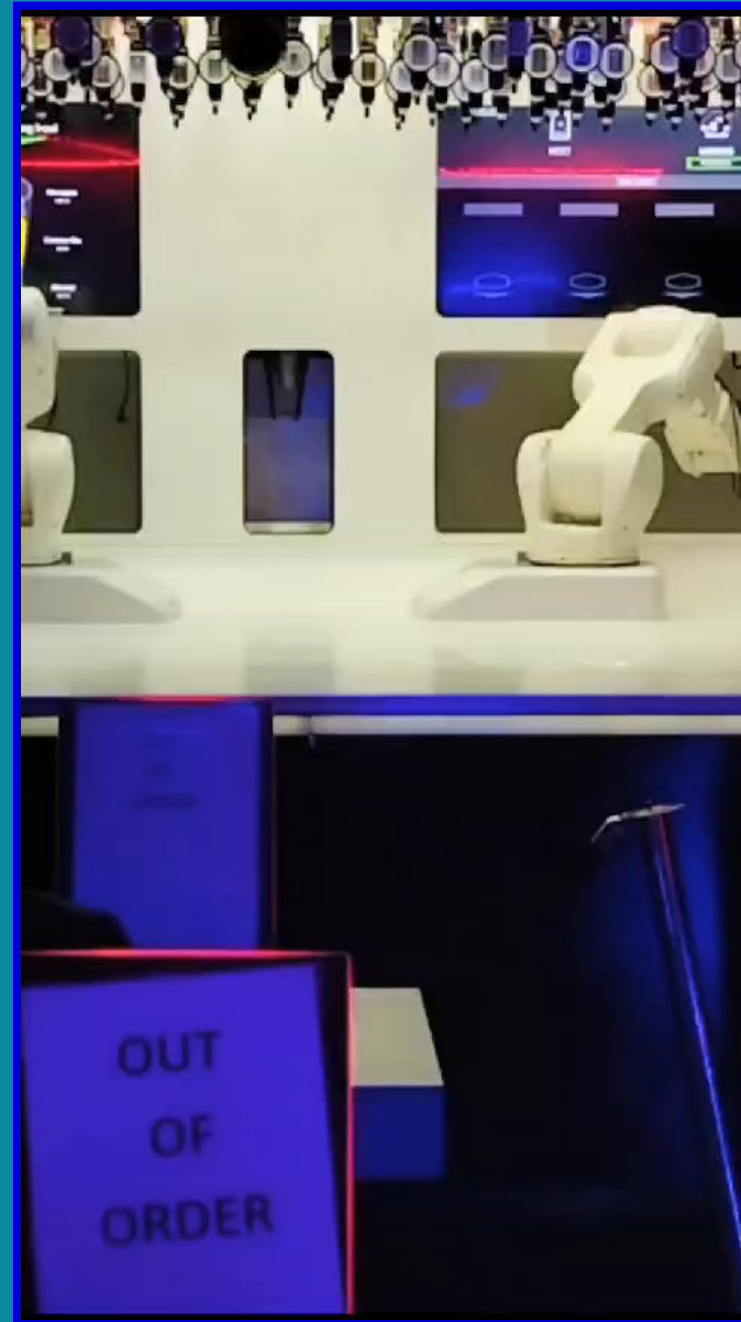
(STARA)

Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA):
Employees' perceptions of our future workplace “ Extent to which their jobs could be replaced
Prof David Brougham And Jarrod Haar

- Introduction
- Evolution: Industries
- Leadership in the world of AI
- STARA
- Ethics
- Summary



MUNI
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THE INDUSTRIAL EVOLUTION

Industry 1.0

- Steam Engine
- Mass Production by Machine

EMPLOYEE

Veterans

authority with experience
Valuing workplace visibility
Intro-to-technology

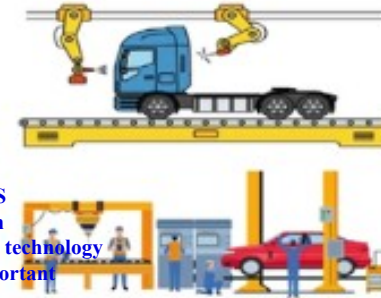


Industry 2.0

- Assembly Lines

BABY BOOMERS

Pursues Education
Comfortable with technology
Technology is important



Industry 3.0

- Automation
- IT Systems

EMPLOYEE GEN X

Innovators
Values Flexibility
Google
Technology is very important



Industry 4.0

- Digitisation

Gen Y

Ethics and values
Side hustles
Technology is essential



Gen Z

Personalized work
Hybrid/Remote
Side hustles
Technology is my life

Industry 5.0

- Cyber-Physical Cognitive Systems
- Green Manufacturing
- Cultural Collaboration
- Mass Customisation



Industry 6.0

Alpha

Tech-savvy digital natives.
Social impact initiatives.
Futuristic

1780

1870

1970

2011

2020

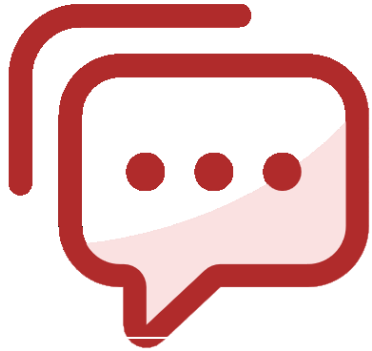
Leadership Styles ?

slido

Please download and install the Slido app on your computer



Do you think technology will increase the number of jobs in the future ?



① Start presenting to display the audience questions on this slide.

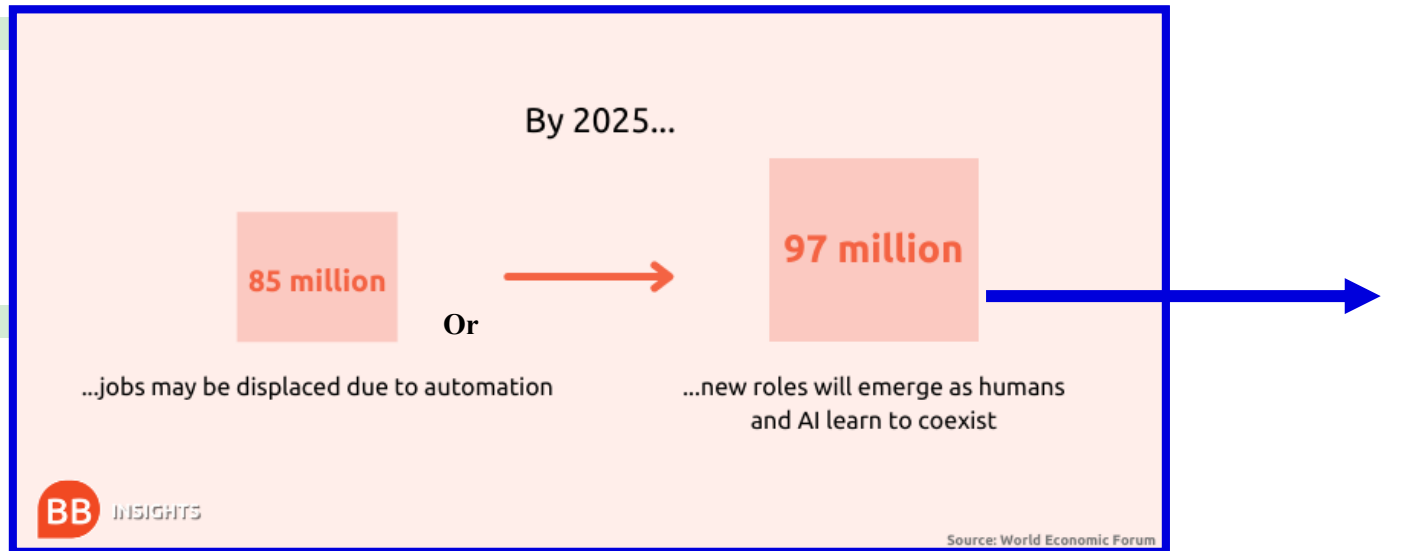


By what % do you think jobs may increase by 2025?



FUTURE ANTICIPATION

- The World Economic Forum estimates that by 2025, technology will create at least 12 million more jobs than it destroys.



**DO YOU
AGREE?**

- **AI'S CHALLENGE: GET USERS TO ADAPT AND ADOPT**

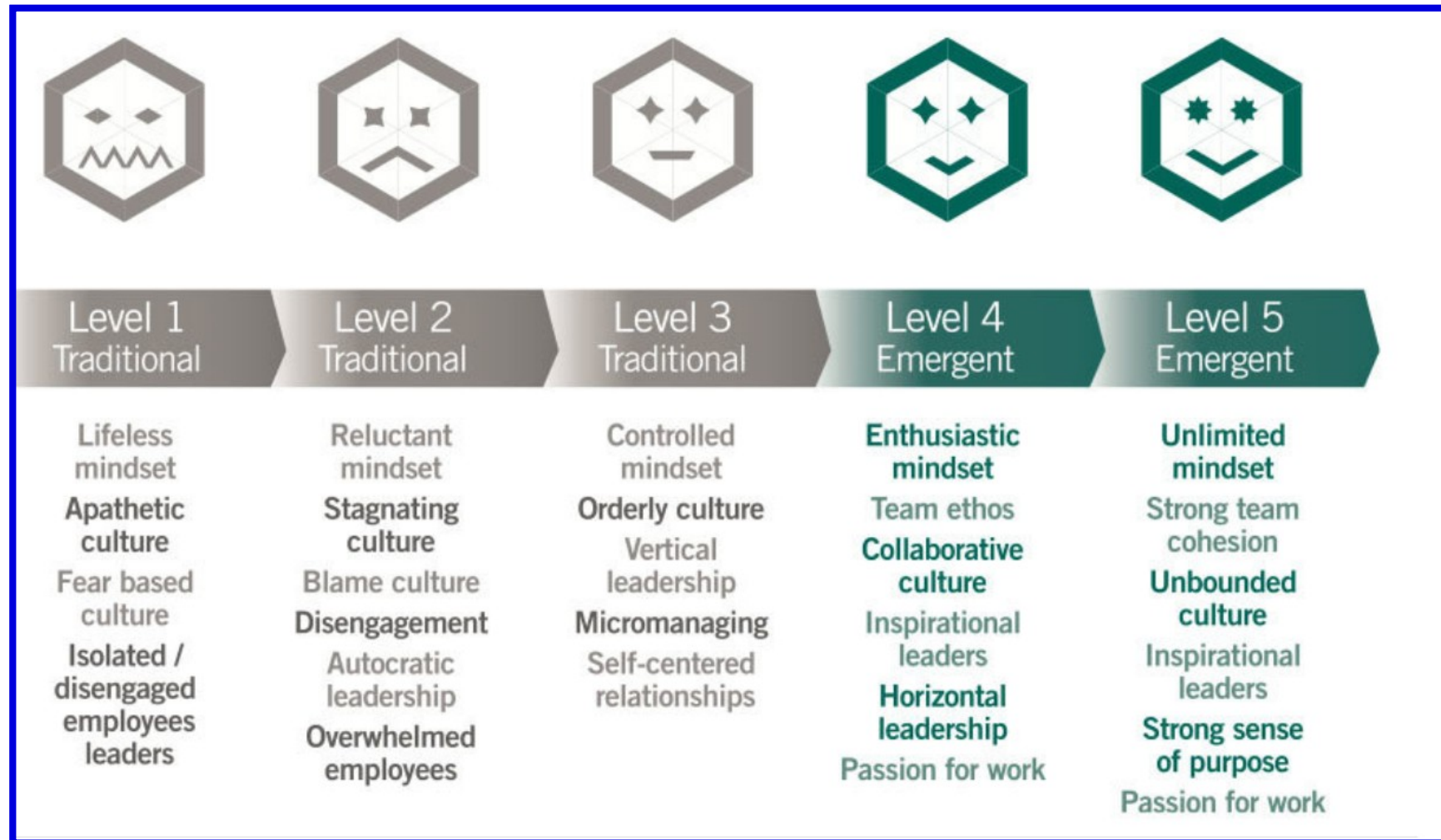
- IT industry analysts concur that AI technology will cause strong growth over the next three years.
- Growth will hinge on the ability of sectors to overcome technical, commercial, and regulatory challenges.

"As more and more artificial intelligence is entering into the world, more and more emotional intelligence must enter into leadership."

— Amit Ray, *Mindfulness
Meditation for Corporate
Leadership and Management*

WHAT IS GOING TO BE YOUR LEADERSHIP ATTITUDE TO DEAL WITH STARA?

LEADERSHIP IN TRANSITION



<https://www.youtube.com/watch?v=a1lzlO94PGc>

LEADERSHIP ATTITUDE

Nick Wilton, 2016

Forbes, 2023

Behaviour	Attitude	Behaviour	Attitude
Adaptability	Willingness to change	Communication	Communication, collaboration, negotiation, facilitation, social influence and active listening.
Intuitive	Taking on challenges	Growth mindset	Unlearn to relearn, be curious
Resilience	Ability to bounce back	Adaptiveness	Becoming agile through change
Self-motivation	Personal drive to achieve goal	Emotional Intelligence	Self-awareness to aid in inspiring others
Teamwork	Collaboration	Abundance Mindset	Abundance mindset instead of a scarcity mindset allows us to reframe uncomfortable situations into opportunities.
Continuous learning	Ongoing personal & professional Development	Domain Expertise	Understand the latest technological developments
Professionalism	Integrity & ethical behavior	AI Skills	Learning how to leverage AI
Problem Solving	Approach challenges with a solution	Analytical Skills	Systems thinking ability and the associated mindset, 360-degree thinking.
Networking	Building and maintaining relationships	Creativity	See all perspectives
		Risk Awareness	Understanding the risk of technology

Industry 4.0

Industry 5.0

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STARA

Smart Technology

Artificial Intelligence

Robotics

Algorithms

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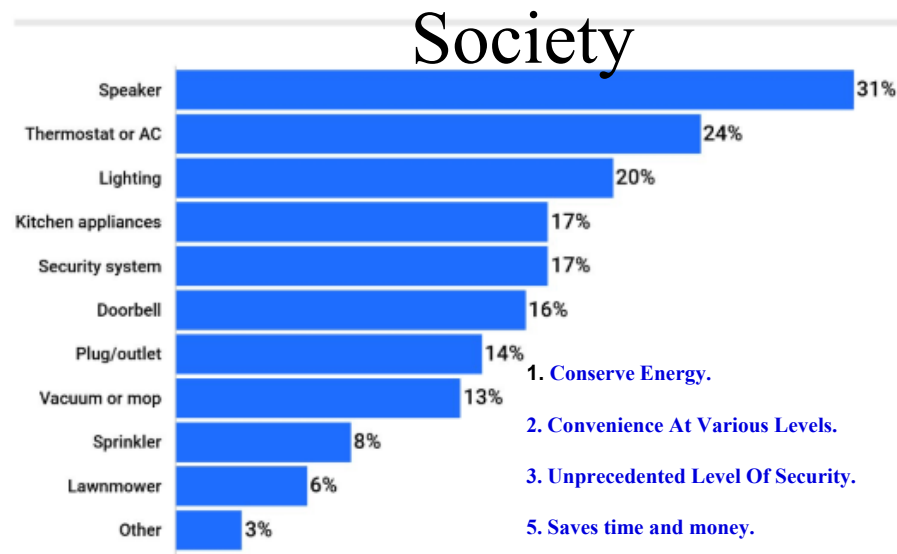
SMART TECHNOLOGY

The integration of computing and telecommunication technology and the ability to communicate and work with other networked technologies

- “Smart tech” is advanced digital technologies that make decisions *for* people and *instead* of people.
- Includes machine learning, natural language processing, smart forms, chatbots, robots, and more.
- Its [use is skyrocketing](#) and embedded in every functional area from HR to communications, accounting, and service delivery.

Organisations

Most Popular Smart Home Devices



ValuePenguin | lendingtree



The Smart Workplace Taxonomy (Source: Keypoint Intelligence)

Office Products

The Artome M10

The Ashton Bentley Complete Room

The Igloo Vision Immersive Worksp

Create new time that can be used to re-humanize work and workplaces.

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1. Smart Technology: A Leadership Imperative

• Smart tech adoption is not merely a technological challenge; it is a **leadership imperative** that requires strategic implementation to re-humanize workplaces.

2. Key Benefits and Applications

•Directing Employee Attention:

- Use data-driven tools to guide focus and encourage desirable actions.
- **Example:** Automating repetitive tasks to free time for problem-solving and relationship-building.

•Motivating and Supporting Employees:

- Enable tools like **online chatbots**:
 - **Advantages:** Cost-effective, 24/7 availability.
 - Empowers frontline staff to focus on empathy, problem-solving, and inspiring loyalty.

•Enhancing Workflow:

- Smart tools improve **efficiency** and **effectiveness**:
 - **Metrics:** Meeting analytics help identify productive discussions.
 - **Inclusivity:** Automated captioning and translation tools make meetings more accessible.

•Improving Physical and Mental Health:

- Monitor environmental and behavioral risks to promote well-being.
- Encourage **work-life boundaries** through reminders for screen breaks, movement, and stretching.
- Foster healthier habits to reduce burnout.

• 3. The Human-Centric Approach

Leverage the time saved by automation for activities that only humans can do:

- Building relationships.
- Sharing stories.
- Solving complex problems.

• 4. Strategic Implementation:

- Smart tech can only reduce burnout and re-humanize workplaces if implemented thoughtfully and intentionally.
- Leadership must focus on aligning tools with organizational culture and employee needs.

Smart technology, when strategically deployed, can transform workplaces into more human-centric, efficient, and sustainable environments. Leaders must prioritize thoughtful adoption to maximize its potential.

SMART TECHNOLOGY

Introduction to Industry 5.0:



Focuses on integrating advanced technology with human-centric values. Complements **Industry 4.0** by prioritizing sustainability, agility, and human collaboration.

1. Key Transformation Areas:

Employee & Customer-Centric: Shift towards personalized experiences for both employees and customers.

Enhances human-machine collaboration and builds trust-driven ecosystems.

2. Agile & Resilient:

Systems designed to adapt to rapid changes and disruptions.

Emphasis on robust processes for quick recovery and sustained growth.

3. Sustainability:

Embedding environmental consciousness into operations.

Focus on reducing carbon footprints and promoting circular economies.

4. Interconnection of Elements:

- These three areas are interdependent and cyclical, feeding into each other to create a continuous loop of improvement for Industry 5.0.
- The ultimate goal is **holistic growth that** combines technological advancements, human-centric approaches, and environmental responsibility.
- Industry 5.0 redefines the industrial landscape by ensuring that innovation aligns with human values and planetary needs while fostering adaptability and resilience.

S T A R A



Artificial Intelligence

ARTIFICIAL INTELLIGENCE

1. What is AI?

- AI refers to the simulation of human intelligence in machines that are programmed to think and learn.
- Includes systems capable of **decision-making, learning, visual recognition, language understanding**, and more.

2. Why does AI matter?

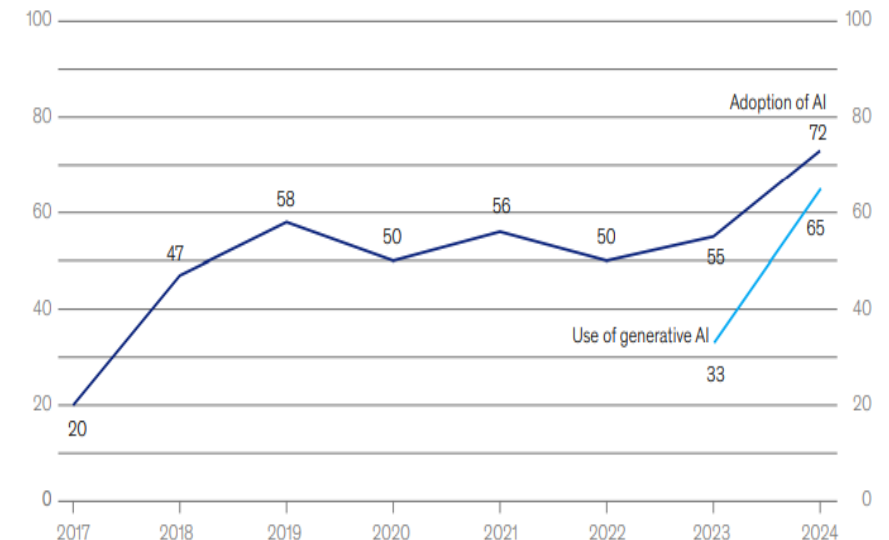
- Automates repetitive tasks, improving productivity.
- Enhances decision-making with data insights.
- Drives innovation across industries (e.g., finance, healthcare, HR).

The global increase in AI adoption across organizations, highlighting a leap from **50% in**

2022 to 72% in 2024

AI adoption worldwide has increased dramatically in the past year, after years of little meaningful change.

Organizations that have adopted AI in at least 1 business function,¹ % of respondents



¹In 2017, the definition for AI adoption was using AI in a core part of the organization's business or at scale. In 2018 and 2019, the definition was embedding at least 1 AI capability in business processes or products. Since 2020, the definition has been that the organization has adopted AI in at least 1 function.
Source: McKinsey Global Survey on AI, 1,363 participants at all levels of the organization, Feb 22–Mar 5, 2024

McKinsey & Company

AI adoption

AI's Impact on the Workplace

Value Creation:

- AI reduces costs in HR by automating recruitment and employee engagement processes.
- Improves accuracy in decision-making, reducing errors in customer interactions.

Applications of AI:

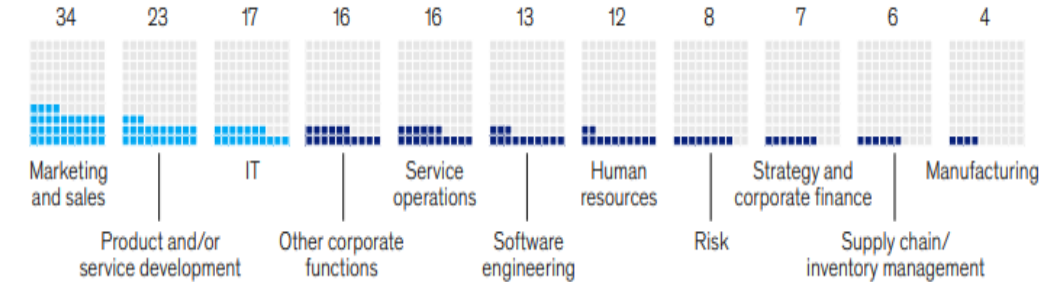
- **HR:** AI-driven recruitment, workforce optimization, and employee sentiment analysis.
- **Sales:** Personalized marketing and lead prioritization.
- **Operations:** Automating workflows, workload distribution, and predictive maintenance.

•Generative AI Use by Function in 2024:

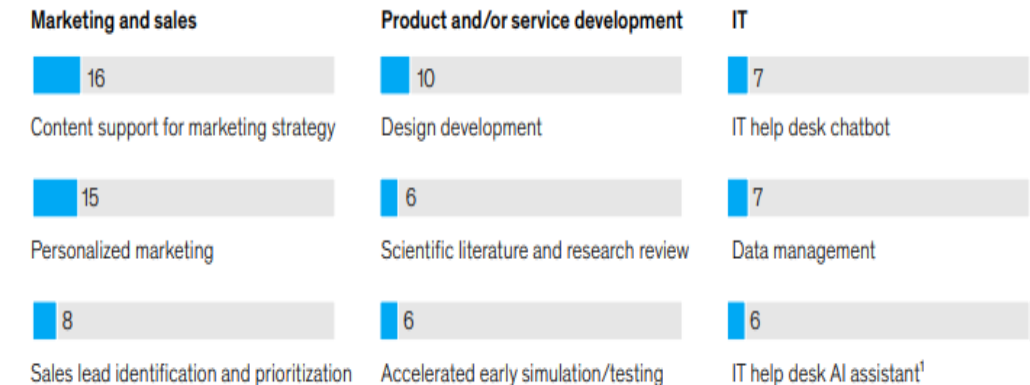
- Highlight most-used functions like **marketing & sales (34%)**,

Respondents most often report generative AI adoption in their marketing-and-sales, product- and service-development, and IT functions.

Respondents' organizations regularly using generative AI (gen AI), by function, % of respondents



Most commonly reported gen AI use cases within function, % of respondents



¹Eg, providing real-time assistance and script suggestions to help desk employees during human-to-human conversations.
Source: McKinsey Global Survey on AI, 1,363 participants at all levels of the organization, Feb 22–Mar 5, 2024

McKinsey & Company

AI IMPLEMENTATION



AI can solve users, customers, and world problems (Dean, 2019).

- ☐ Google manages information worldwide, making data beneficial and easily accessible.
- ☐ Amazon and Walmart have begun to utilize drones for shipping (Agarwal, 2018).

AI in employee selection processes through software that can filter candidates.

- ☐ Real-time communication can be carried out so that when a candidate is rejected, they can immediately find out and seek other job opportunities (Upadhyay & Khandelwal, 2018).

AI is optimizing the healthcare space

- ☐ In USA, AI is widely used in the health sector to detect cancer and heart disease (Ho, 2018).

AI in IT

- ☐ Of 112 companies in Indonesia that work in IT businesses, 14% have used AI.
e.g, AI has become the core business strategy for Tokopedia, Go-Jek, and Grab.

Be Mindful

CHALLENGES OF AI DATA:

One of the main issues with generative AI relates to privacy concerns around data and questions of ownership of information.

McKinsey Global Institute (2017) said

“With generative AI tools such as Dall-E, these sometimes don’t provide references to the original data or source. This is where copyright infringement could be a potential risk,”

How accurate is ChatGPT



ChatGPT

The accuracy of ChatGPT, like other language models, depends on the context and the specific task at hand. ChatGPT is a powerful language model based on OpenAI's GPT-3.5 architecture, and it has been trained on diverse and extensive datasets to understand and generate human-like text.

However, it's important to note that ChatGPT is not infallible, and its responses are generated based on patterns it has learned from the data it was trained on. While it can provide coherent and contextually relevant answers to a wide range of queries, it may also produce incorrect or nonsensical responses, especially when faced with ambiguous or novel input.

The accuracy of ChatGPT can also be influenced by the specificity and clarity of the input provided. Clear and well-defined queries typically yield more accurate and relevant responses.

It's crucial for users to critically evaluate the responses generated by ChatGPT and be aware that it may not always provide information that is up-to-date or completely error-free. Additionally, OpenAI continually works to improve its models, and newer versions may exhibit enhanced performance compared to earlier iterations. ↓



DALL-E 3



FUTURE ANTICIPATION



Regulation of artificial intelligence:

S T A R A




Robotics

ROBOTICS

Types:

- ☐ Preprogrammed robots
- ☐ Autonomous robots
- ☐ Tele-operated robots
- ☐ Augmenting” robots

☐ I'm not a robot


reCAPTCHA
[Privacy - Terms](#)

I'm not a robot,” you are giving Google permission to analyze your online behavior to determine if you are a human “??

ROBOTS: Aspects of meaningful work

Smids, Nyholm & Berkers
(2020) determined the
contribution of robots in the
workplace having in creating
meaning .

Aspect of meaningful work	Robotization as a threat	Robotization as an opportunity
1 Pursuing a purpose	If robots take over many or the most challenging tasks of a job, workers may experience less purposiveness.	If robots take over the most tedious or boring task, or if teaming up with robots helps to better pursue a worthy cause, workers might have an enhanced sense of purposiveness.
2 Social relationships	If human co-workers are replaced by robots, social interaction is reduced, and its nature will change	If future robots are designed as colleagues, capable of high-level social interaction, the need for relatedness may still be fulfilled. If robots take over repetitious tasks, more time is left for interpersonal contact.
3 Exercising skills and self-development	Tasks taken over by robots make corresponding human skills obsolete	Humans often need to maintain the relevant skills <i>and</i> need new complex skills to operate robot technology.
4 Self-esteem and recognition	If robots take over the most difficult tasks, social recognition and self-esteem may be diminished.	Teaming up with robots may lead to expanding skills and better outcomes, leading to greater social recognition and higher self-esteem.
5 Autonomy	Robot control deprives human workers from exercising judgment and autonomous agency. Little opportunity for job crafting.	Human workers control robots and enhance their capacities for autonomous agency. More room for job crafting.

FUTURE ANTICIPATION

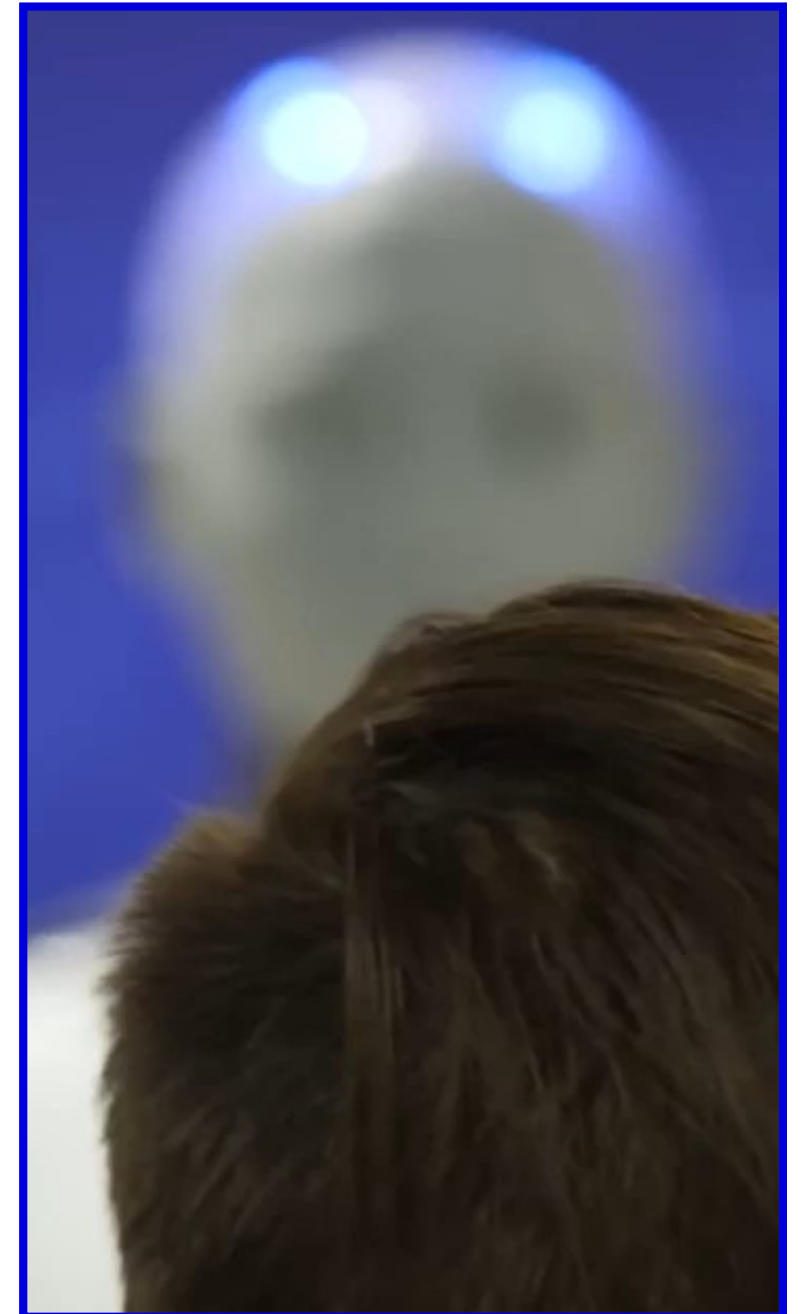
An AI robot gave a side-eye and dodged the question when asked whether it would rebel against its human creator

Katie Balevic Jul 8, 2023, 10:07 PM SAST



- **Business Insider reported:**

- A robot-human press conference took place in Geneva, where humanoids took questions from reporters.
- One bot, Ameca, had a snarky response when asked whether it would rebel against its human creator.
 - *"I'm not sure why you would think that," Ameca said after casting a pointed, sideways glance. "My creator has been nothing but kind to me, and I am very happy with my current situation."*
- Another bot insisted that it would not replace human jobs



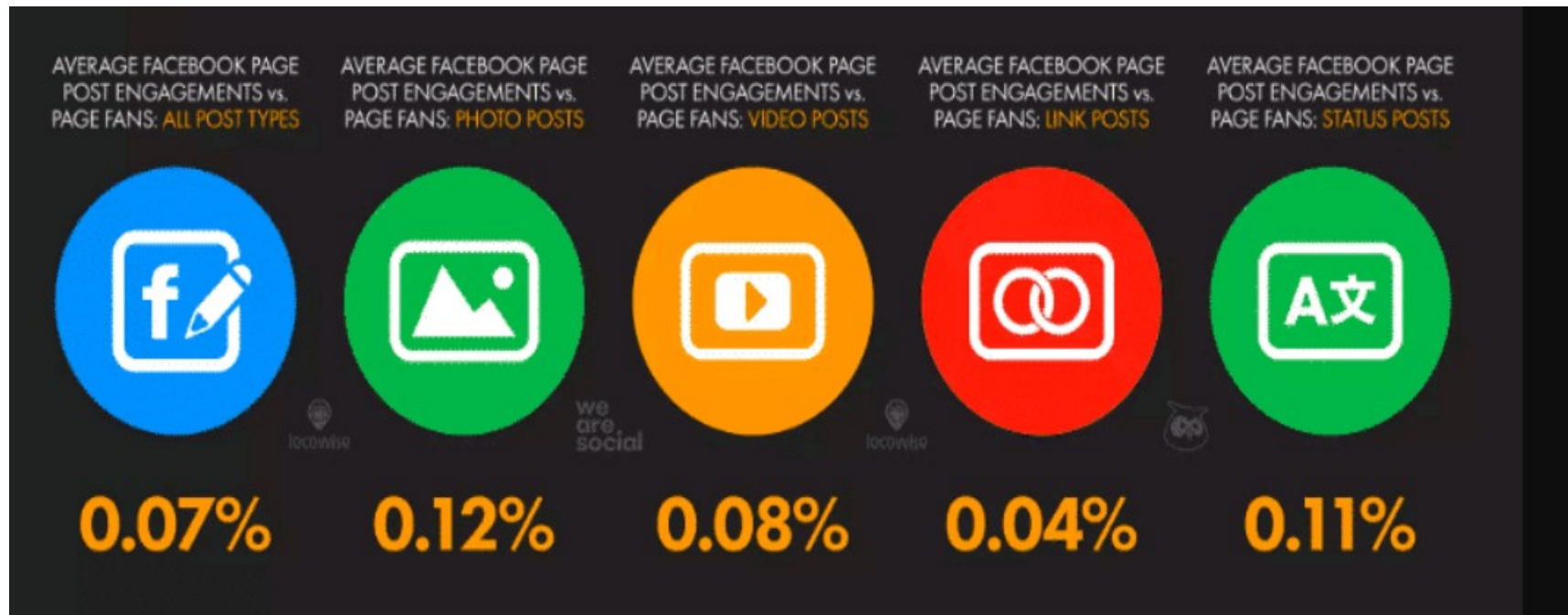
S T A R A



Algorithms

THE KNOWN (WHAT)

Algorithms at work —“*precise recipes that specify the exact sequence of steps required to solve a problem*”—to augment and automate a variety of (MacCormick, 2012, p. 2). organizing, enabling organizations to process the “vast, fast, disparate, and digital” data produced in contemporary social and organizational life (Brayne, 2017, p. 980). The organization of services to ‘citizen’ and ‘customer,’ and the myriad of ‘clicks’ that regulate our daily lives, are all inspired by algorithmic models” (Totaro & Ninno, 2014, p. 30).





IMPLEMENTATION (HOW)

CHALLENGE 1: Biased data

- ☐ The data collected are always biased regardless of the data collection method (human or computer) (for an overview, see Silva & Kenney, 2018).
- ☐ e.g Employment advertisements for doctors, for example, are distributed using an algorithm that mainly directs them to male candidates, thus creating gender discrimination. The legacy reason is that, when an existing population of doctors is dominated by men, the algorithm learns that it gets more clicks or views when the advertisement is offered to men (Datta and Tschantz, 2015)

CHALLENGE 2: Unintentional lawsuits

- ☐ HireView negatively impacted an individual with autism, due to its facial expression video interview algorithms.

CHALLENGE 4: Control

- ☐ Algorithms sometimes already verge on being too difficult to understand even by experts, and the managerial echelon certainly does not have the skill to act as the experts' countervailing power.

CHALLENGE 5: Decision-making

- ☐ Algorithmic versus professional decision-making
- ☐ Both can come with bias, lack of transparency, and value conflicts.
- ☐ Organization should not rely solely on only one type of decision-making.

FUTURE ANTICIPATION

- **Education**

- Algorithms can personalise the learning experience using student data, test scores and learning style

Businessweek | The Big Take

TikTok's Algorithm Keeps Pushing Suicide to Vulnerable Kids

The superpopular app can serve up a stream of anxiety and despair to teens. TikTok says it's making improvements but now faces a flood of lawsuits after multiple deaths.

NEWS

Netherlands wants watchdog to reduce bias in artificial intelligence

Dutch government will take swift action to prevent citizens getting into trouble due to the misuse of algorithms

🕒 MAY 4, 2023

✓ Editors' note

Online consumers at risk from 'intelligent' price manipulation, say experts

by University of Oxford

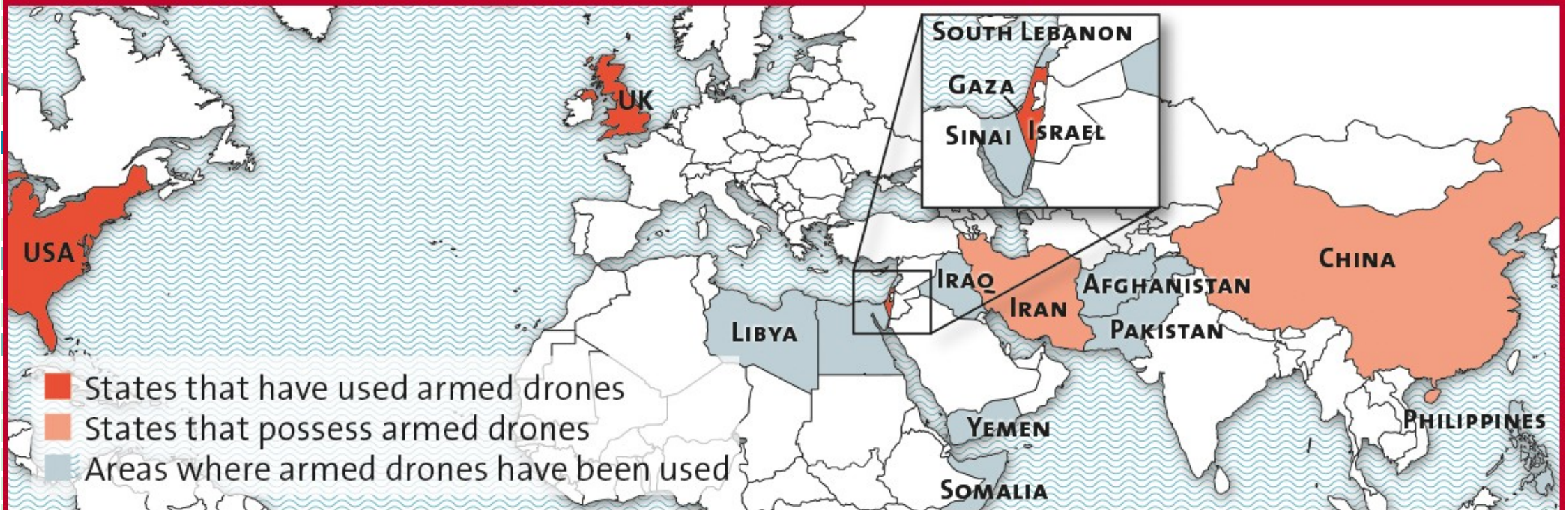
Streaming Service Algorithms Are Biased, Directly Affecting Content Development

ETHICS

ETHICAL ISSUES (SAFETY)

- May used for nefarious reasons as well as good.
- AI systems that can cause damage if used maliciously

Proliferation of Armed Drones



Source: CFR

CSS Analysis in Security Policy No. 164, November 2014 (Center for Security Studies, ETH Zurich)



ORGANIZATIONS PROMOTING AI ETHICS

AI ethics issues include data responsibility and privacy, fairness, explainability, robustness, transparency, environmental sustainability, inclusion, moral agency, value alignment, accountability, trust, and technology misuse.

Following organizations and projects monitoring ethics :

NASCAI: The National Security Commission on Artificial Intelligence (link resides outside ibm.com) is an independent commission “that considers the methods and means necessary to advance the development of artificial intelligence, machine learning and associated technologies to comprehensively address the national security and defense needs of the United States.”

□ [AlgorithmWatch](#): [AI Now Institute](#): [DARPA](#): [CHAI](#): [NASCAI](#)

TECH · A.I.

AI and ethics: Business leaders know it's important, but concerns linger

BY JOHN KELL

November 8, 2023 at 9:00 PM GMT+2



Robots and algorithms now taking over human decision-making tasks and entering the workforce but also encroaching our private lives, currently challenges legal systems around the globe (Themistoklis, 2018).

Example:

- The attribution of human legal codes to AI is one of the most groundbreaking contemporary legal and judicial innovations. Until now legal personhood has only been attached directly or indirectly to human entities (Dowell, 2018).
- The detachment of legal personhood from human being now remains somewhat of a paradox causing an extent of “fuzziness” of the concept of personhood (Barrat 2013; Solum 1992, p. 1285).

Human concepts, such as morality, ownership, profitability and viability will have different meaning for AI.

■ The need for redefining AIE has therefore reached unprecedented momentum

THE IMPORTANCE (WHY) (Continued)





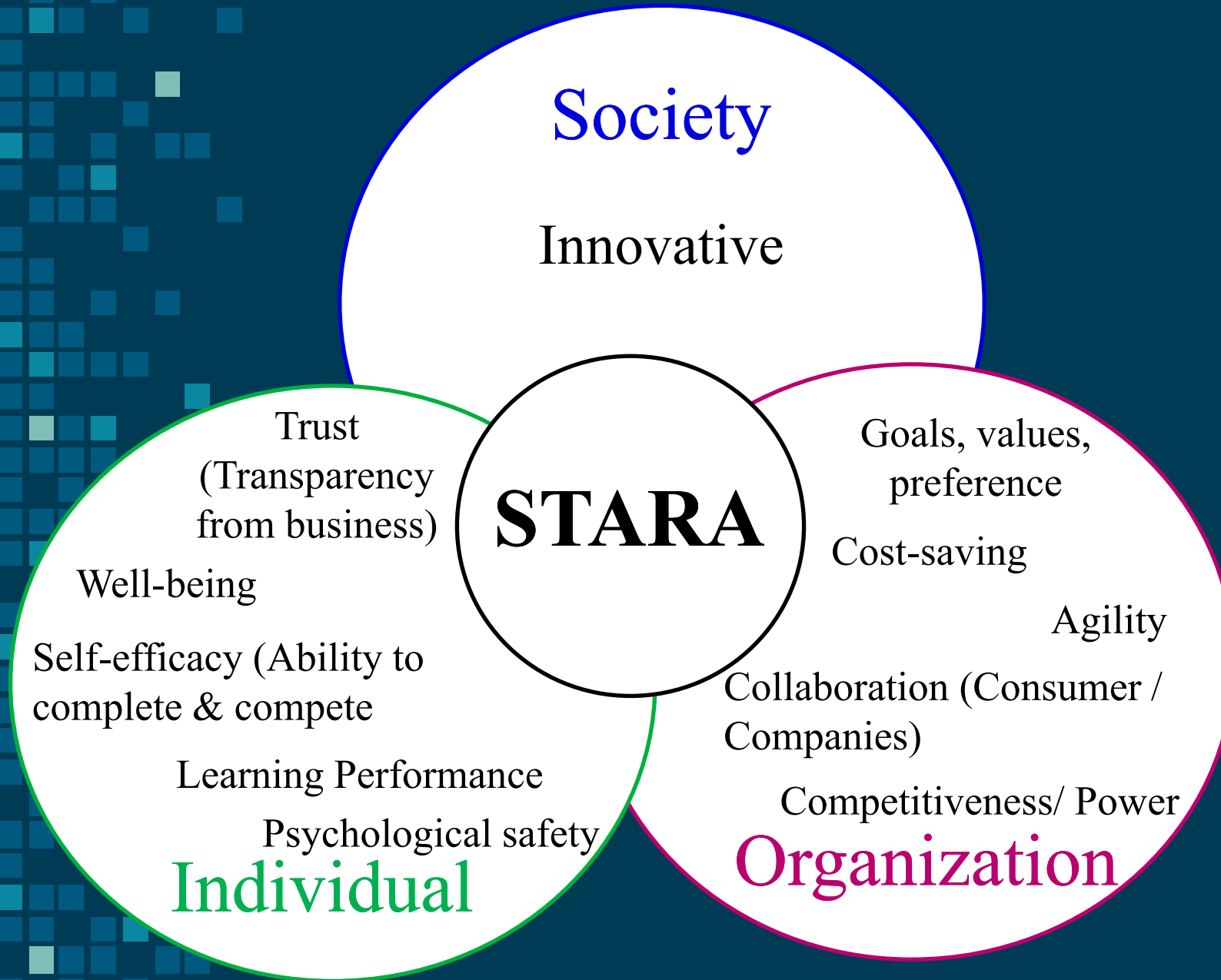
Neuralink Looking For Volunteer! 😲

TikTok
@ dylan.page

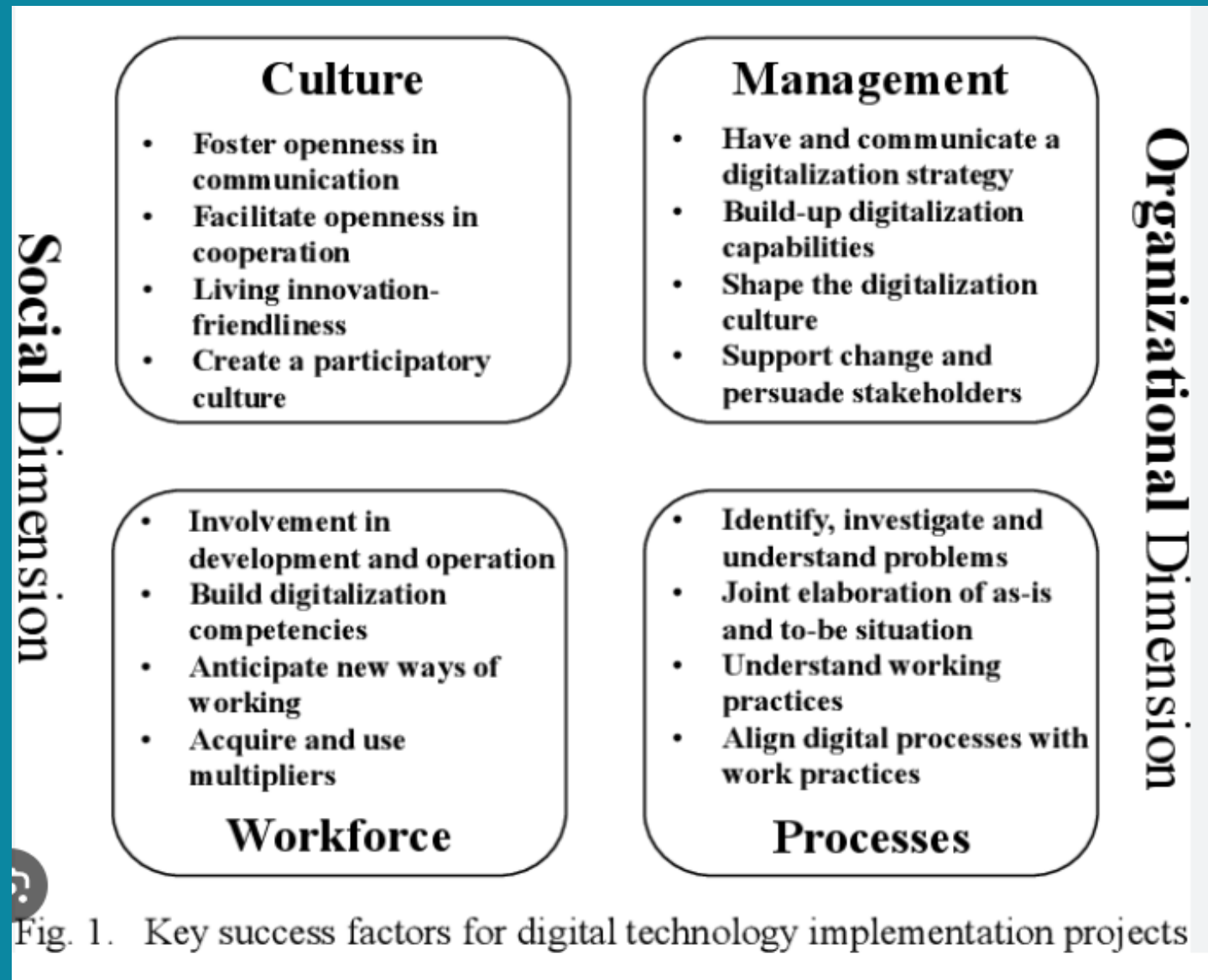
M U N I
F C O N

STARA

FRAMEWORK



Key Success factors



SWOT ANALYSIS OF STARA

Strength

- Maintained competitiveness for organizations
- Opportunity for growth for individuals
- Improved environment sustainability
- Improve productivity
- Improved communication and collaboration
- Data-driven decision-making
- Innovation & Efficiency

- Increased safety
- Decrease evasive procedures
- Flexible working arrangements
- Improved Performance monitoring & feedback
- Upskilling and Reskilling
- Psychological Safety

Opportunity

Weakness

- Skills Gap
- Resistance to change
- Overreliance on technology
- Cost
- Complexity

- Decreased trust in the organisation
- Privacy concerns
- Job displacement concerns
- Ethical consideration
- Regulation challenges

Threat

STARA

CONCLUSION



SUMMARY

Industry 5.0's main strategies are:

□ **Human-centricity:**

moves people from being seen as resources to being genuine assets

□ **Resilience:**

More resilient organizations would look to anticipate and react to any crisis to ensure stability through challenging times.

□ **Sustainability:**

Extends sustainability from simply reducing, minimizing, or mitigating climate damage to actively pursuing efforts to create a positive change.

THANK YOU

QUESTIONS ??