

Converting Research into Practice

DBA

Doctor of Business Administration
University of Wales Trinity Saint David

What we have covered in Day 2

Conceptualize, design and implement a Research Project

How to write a Research Proposal and its Assessment

How to do Qualitative Research

Homework – think about YOUR interested area of Research

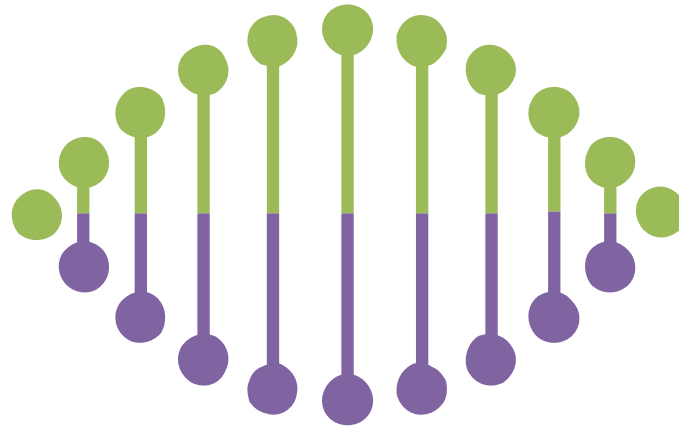
Day 3: 11 January

Sharing on your interested area of Research

Some Contemporary Management Topics

AI Applications - Business & Human Resources Management

How to do a Pilot Study



Sharing on your interested area of research

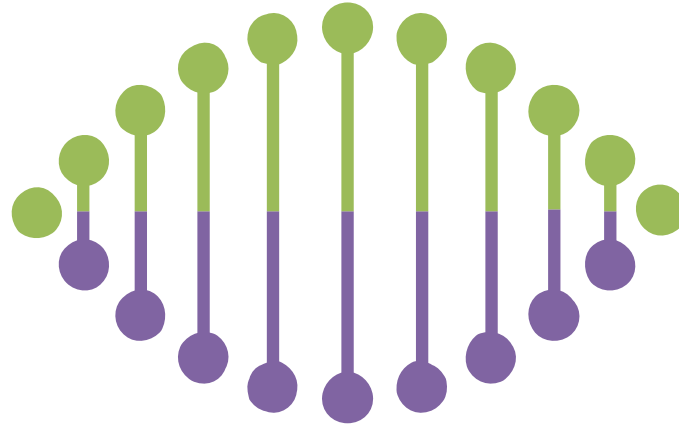
Key Questions

1. Which **area** or **field** are you interested in and capable to do?
2. What is the main **purpose** of your research?
3. Where is the research **field**? E.g. in an organization, community
4. Would it likely to be a **qualitative** or **quantitative** study? Or mixed method?
5. What is the **unit of analysis**? E.g. individuals, groups, organizations

Develop a Purpose Statement

What is the purpose of your study? Why should anyone have interested in it?

- The purpose of this **quantitative** study is to (compare/determine) _____.
- The purpose of this **qualitative** study is to (explore/discover/understand/describe) (the central phenomenon) for (participants) at (research site).



Some contemporary Management topics

General Management 1

- **Agile Management:** Explore the principles of agile management, which emphasize flexibility, adaptability, and iterative approaches to managing projects and organizations. Topics can include agile project management, agile leadership, and agile organizational design.

VUCA Model

Volatility, Uncertainty, Complexity, Ambiguity

The VUCA world of the 2000s

- a framework for understanding and addressing the challenges of a volatile, uncertain, complex, and ambiguous world

The term was first coined by the U.S. Army War College to describe the challenges of operating in a post-Cold War world.

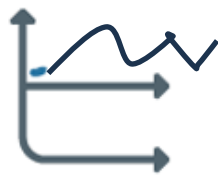
Rapid changes →
organizations must be
prepared for
unexpected shifts

Future events
unpredictable →
leaders make decisions
with **incomplete
information**

Many interconnected
variables →
leaders understand
systems thinking

Lack of clarity →
leaders interpret
and act in **unclear
situations**

VUCA



Volatility



Uncertainty



Complexity



Ambiguity

Importance of Leadership in VUCA

critical role of LEADERS

Navigators of Change

Leaders must guide teams through uncertainty

Visionaries

Set a clear vision that aligns with institutional goals

Change Agents

Essential in fostering culture that embraces change

Change Management

Agility and innovation

How a group of NASA renegades transformed mission control.

MIT Sloan Management Review, 2019.

The Reinvention of NASA

Harvard Business Review, 2018.

Discuss strategic agility at NASA over the decades

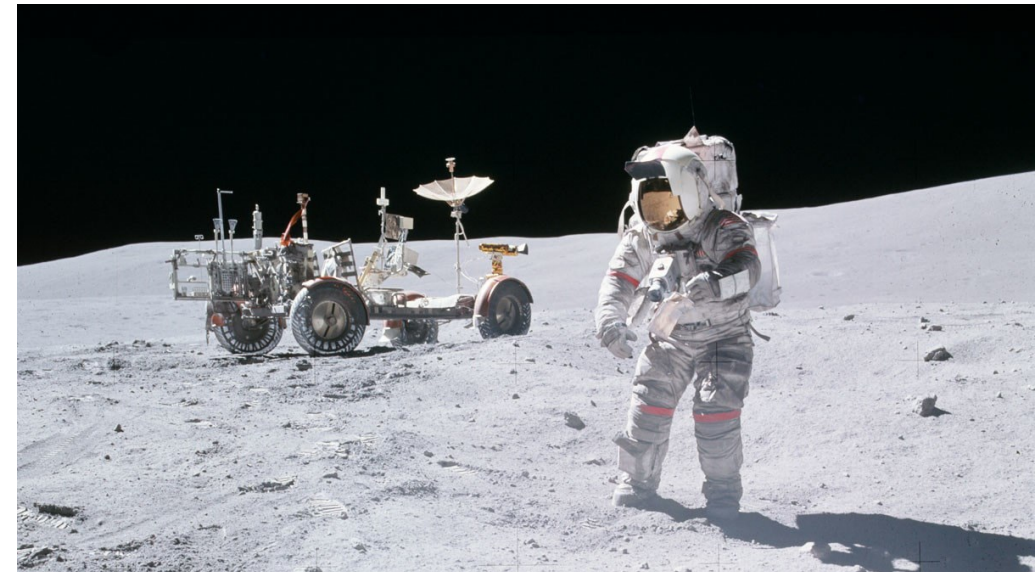
<https://hbr.org/2018/04/the-reinvention-of-nasa>

NASA's new space race strategy: Achieving ambidexterity at NASA, 2015.

Loizos Heracleous

Professor of Strategy, The University of Warwick

Source: <https://www.heracleous.org/>



The Five Principles of Ambidexterity

Ambidexterity is the ability to use both the right and left hand equally well.

1. Strategic use of technology
2. Invest beyond financials
3. Configure culture and processes
4. Harness the power of networks and business systems
5. Develop ambidextrous leadership

General Management 2

- **Lean Management:** Lean management principles focus on eliminating waste, optimizing processes, and continuously improving efficiency. Topics can include lean production, lean supply chain management, lean Six Sigma, and lean project management.
- **Gamification:** Explore the use of game elements and mechanics in business and management contexts. Topics can include gamification for employee engagement, gamified learning and training, and gamification in marketing and customer engagement.

General Management 3

- **Corporate Governance:** Examine theories and practices related to corporate governance, which focuses on the systems and processes for controlling and directing organizations. Topics can include board effectiveness, executive compensation, shareholder activism, and corporate governance reforms.

Leadership 1

- **Strategic Leadership:** Examine theories and models of strategic leadership and their application in driving organizational success. Topics can include strategic thinking, strategic decision-making, leadership styles, and strategic change management.
- **Servant Leadership:** Servant leadership theory emphasizes leaders' focus on serving and empowering their followers. Topics can include servant leadership behaviors, ethical leadership, employee empowerment, and fostering a culture of servant leadership.

Leadership 2

- **Neuroleadership**: Neuroleadership combines neuroscience and leadership theory to understand and improve leadership effectiveness. Topics can include brain-based leadership, emotional intelligence, decision-making, and neuroscience-based coaching and development.
- **Talent Management**: Explore strategies for attracting, developing, and retaining top talent within organizations. Topics can include talent acquisition, performance management, succession planning, and employee engagement.

Organizational Management 1

- **Innovation and Entrepreneurship:** Examine theories and practices related to innovation and entrepreneurship in organizations. Topics can include innovation management, entrepreneurial mindset, open innovation, and fostering a culture of innovation.
- **Corporate Entrepreneurship:** Explore the intersection of entrepreneurship and established organizations. Topics can include corporate entrepreneurship strategies, fostering an entrepreneurial culture, intrapreneurship, and corporate venture capital.

Organizational Management 2

- **Organizational Resilience:** Discuss theories and strategies for building organizational resilience in the face of uncertainty, disruption, and crisis. Topics can include risk management, crisis management, change management, and organizational learning.
- **Change Leadership:** Discuss theories and practices related to leading organizational change effectively. Topics can include change management models, change communication and stakeholder engagement, overcoming resistance to change, and sustaining change initiatives.

Organizational Management 3

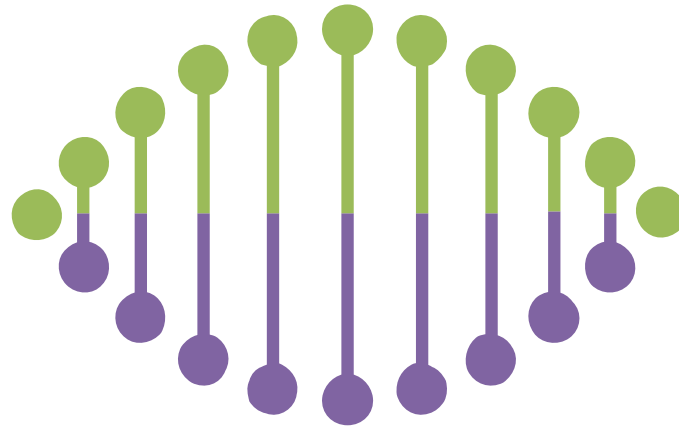
- **Sustainability and Corporate Social Responsibility (CSR):** Examine theories and practices related to sustainability and CSR in organizations. Topics can include sustainable business models, environmental management, social impact, ethical decision-making, and stakeholder engagement.
- **Diversity and Inclusion:** Explore theories and practices related to diversity and inclusion in the workplace. Discuss topics such as diversity management, inclusive leadership, unconscious bias, and creating inclusive organizational cultures.

More on new approach

- **Design Thinking**
 - a human-centered approach to problem-solving and innovation, such as empathetic understanding, ideation, prototyping, and user-centered design
 - applied in the fields of product design and user experience
 - relevant to a wide range of business and management activities, including strategy development, organizational change, process improvement, and customer experience enhancement
 - emphasis on **empathy**, **experimentation**, and **iteration** aligns with contemporary business needs, where organizations strive to be agile, customer-centric, and adaptable in a rapidly changing marketplace.
 - focus on understanding user needs, generating **creative ideas**, prototyping solutions, and iterating based on user feedback, design thinking helps businesses create customer-centric products, services, and experiences

More on new approach

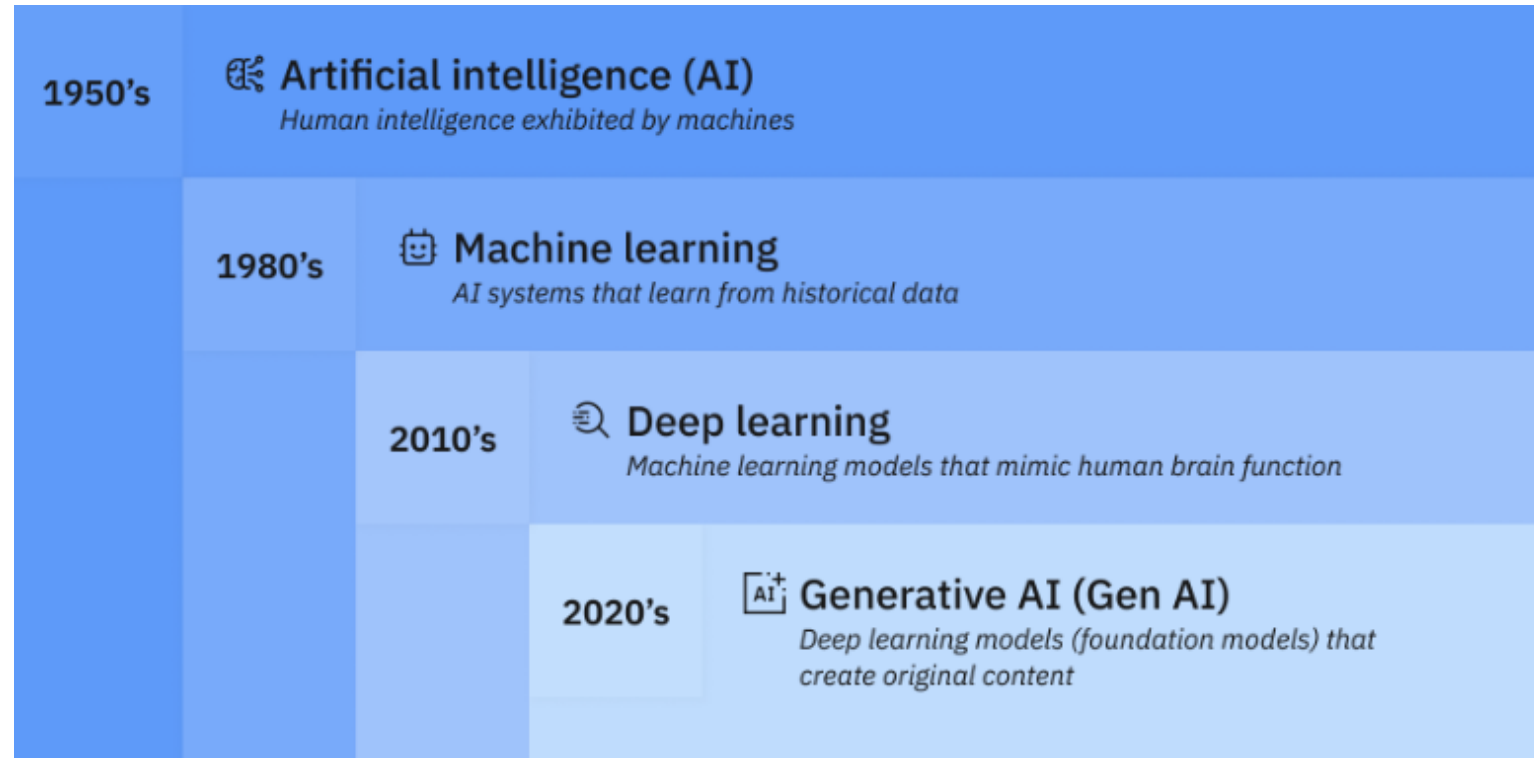
- **Data Analytics and Business Intelligence**
- Explore the role of data analytics and business intelligence in decision-making and organizational performance. Topics can include data-driven decision-making, predictive analytics, data visualization, and business intelligence tools and techniques.



AI Applications in Business

What is AI?

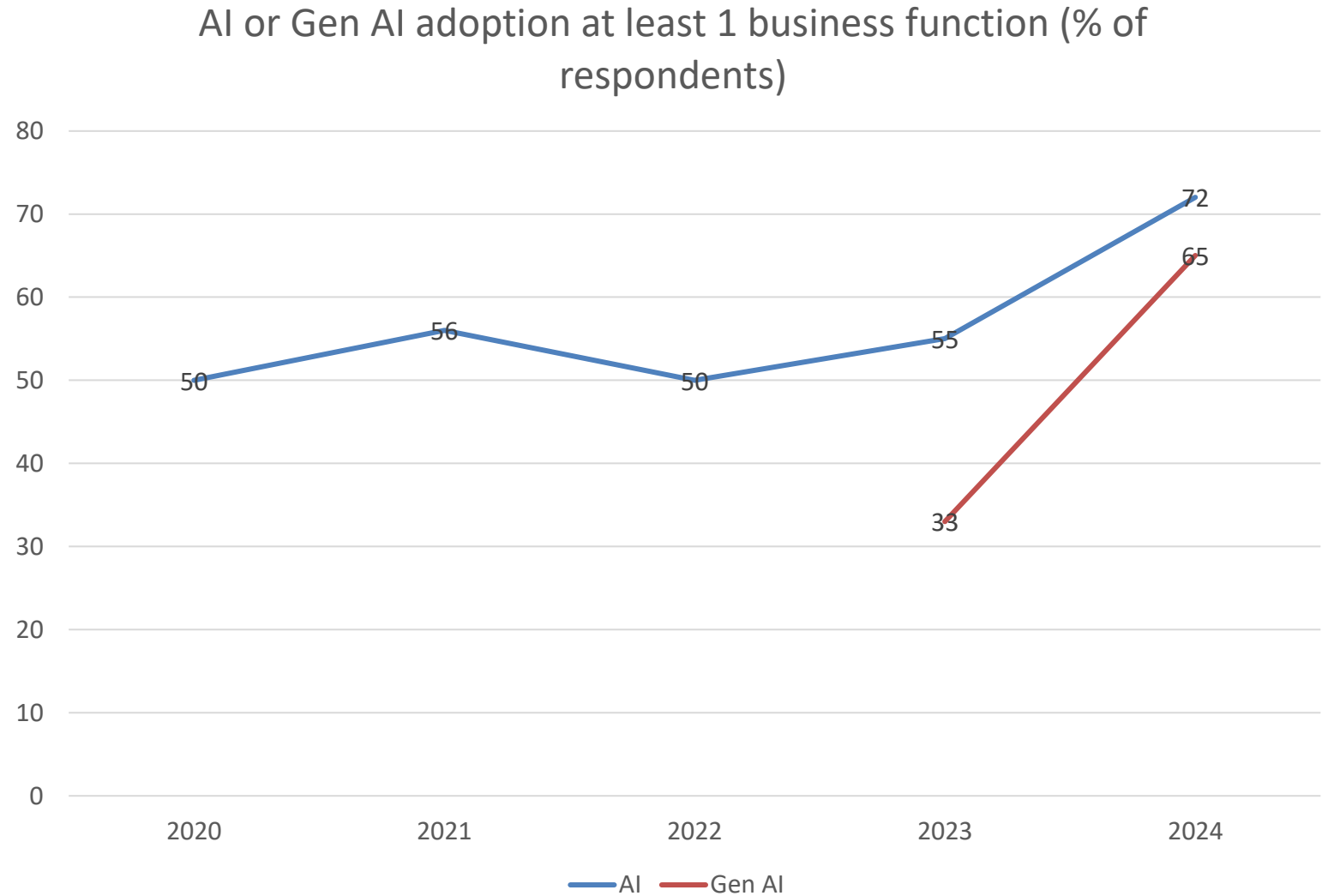
Artificial intelligence (AI) is technology that enables **computers** and **machines** to simulate human learning, comprehension, problem solving, decision making, creativity and autonomy.
(IBM)

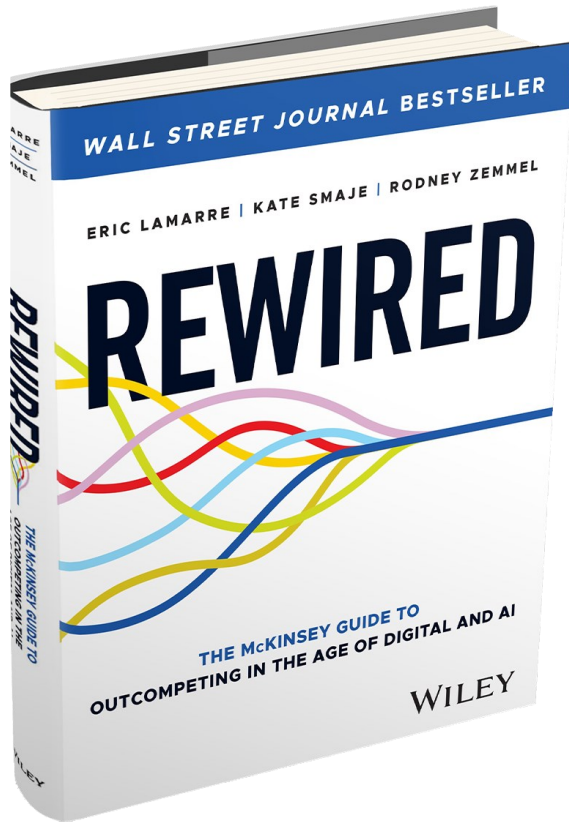


<https://www.ibm.com/think/topics/artificial-intelligence>

McKinsey & Company (2024). The state of AI in early 2024: Gen AI adoption spikes and starts to generate value

Generative AI, "gen AI" deep learning models that can create complex original content—such as long-form **text**, high-quality **images**, **realistic video** or audio and more—in response to a user's prompt or request. (IBM)



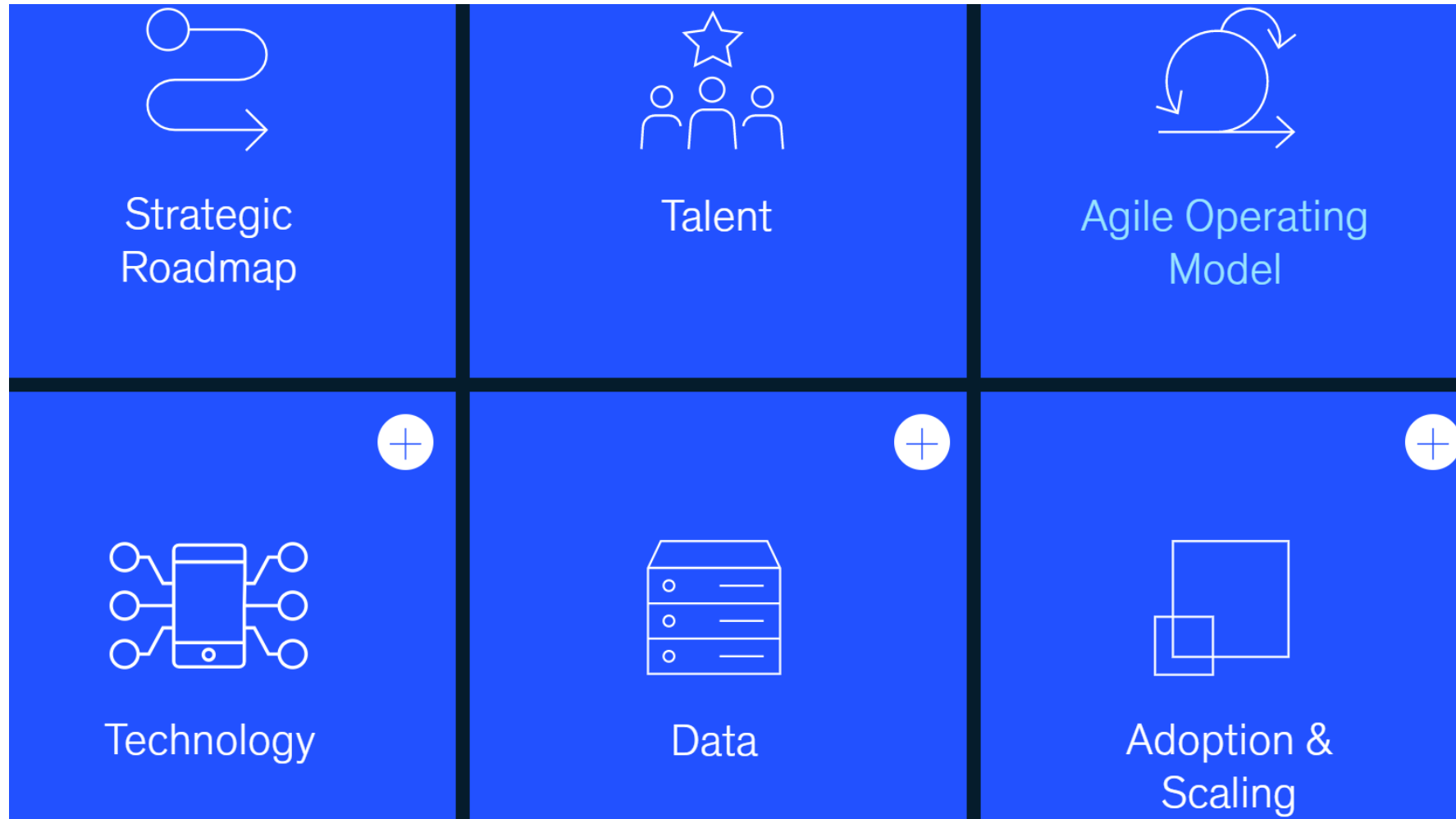


Rewired

The McKinsey guide to outcompeting in the age of digital and AI

Most companies have started a digital and AI transformation, but very few have done the fundamental **organizational rewiring** needed to build the capabilities to drive continuous innovation across the enterprise. After analyzing the results of 200 large-scale digital and AI transformations, McKinsey has found that long-term success comes when the C-suite fundamentally changes their **talent, operating model, technology** and **data capabilities**. For the first time, Rewired translates the hard-won lessons McKinsey has learned helping companies deliver successful digital and AI transformations into a detailed “how to” manual. This playbook, which McKinsey has been developing and using with clients for the past six years, lays out exactly what it takes to build the capabilities to continually create great customer experiences, lower costs, and build value. It contains diagnostic assessments, operating model designs, best practices and detailed implementation methods, all exemplified with real-life case studies and illustrated with 100+ exhibits. Business leaders will be digitally transforming their companies for the rest of their careers. Rewired is the reference manual they need for the journey.

There are **six elements** of successful digital and AI transformations — businesses need to be good at all of them to capture the full value at stake.



Recipe for capturing value from digital and AI transformations

1. Strategy:

Creating the Transformation Roadmap

- Successful transformations start with the CEO and top leadership reimagining their business in the digital age.
- The resulting decisions are translated into a detailed strategic roadmap that is both rooted in impact and clear about the new capabilities needed to deliver it.
- Leading companies develop transformation roadmaps focused on business domains that are **big enough** to generate meaningful value but **small enough** that it doesn't disrupt large parts of the business.



Recipe for capturing value from digital and AI transformations



2. Building Your Talent Bench

- You can't outsource your way to digital excellence.
- Companies need the capabilities to build and evolve their proprietary digital solutions, and that requires **quality digital and AI talent**.
- Top organizations create a detailed **talent roadmap** to hire the best and create an environment where they thrive.
- This requires understanding what really motivates top talent and adjusting the company's culture and approach to excite them.

Recipe for capturing value from digital and AI transformations



3. Adopting an Agile Operating Model

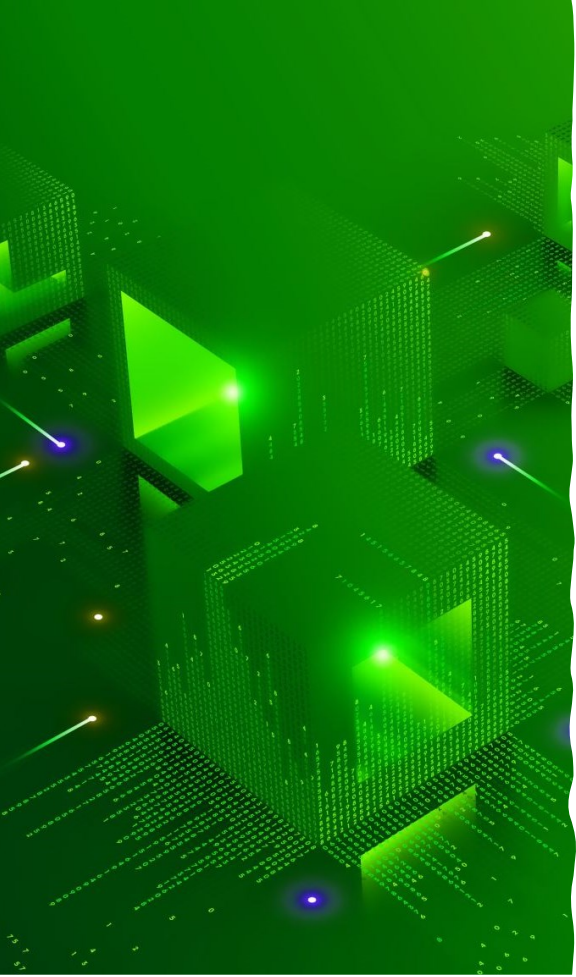
- Building and scaling digital and AI solutions across hundreds of working teams require companies to be much **faster** and more **flexible** in the way they develop technology, so having an agile operating model is critical.
- Developing that operating model, however, is perhaps the most complex aspect of a transformation because it touches the core of the organization and how people work together.
- It requires determining the right operating model for you, and building up core capabilities in product management and experience design.



Recipe for capturing value from digital and AI transformations

4. Technology for Speed and Distributed Innovation

- The objective for technology is to make it easy for your pods to constantly develop and release digital and AI innovations to customers and users.
- Achieving this requires building a **distributed technology** environment for easy access to data, applications, and software development tools pods need to rapidly innovate and deliver secure, high-quality solutions.



Recipe for capturing value from digital and AI transformations

5. Embedded Data Everywhere

- The ability of the technology solutions to generate value is dependent on the quality, relevance, and availability of data.
- That's why it's critical to architect data thoughtfully for easy consumption, reuse, and scaling.
- The goal is to have the data teams need so they can use it to make better decisions and build better data-enabled solutions.
- The key is to build a set of data products that can be **easily consumed** by any team or application across the organization.



Recipe for capturing value from digital and AI transformations

6. Change Management

The Keys to **Unlock Adoption and Scaling**

- Getting customers or business users to adopt solutions as part of their day-to-day activities, and scaling them across your customer base, markets, or organizational units are often a massive challenge.
- Companies need to address the technical, process, and human issues at a sufficiently granular level, have **clear KPIs** to track progress, and ensure teams are capturing the value.



Specific case analysis

DBS

- Transforming a banking leader into a **technology leader** (Asia-Pacific, Banking)
- In a rapidly changing digital landscape, Singapore-based DBS bank aspired to transform into a truly digital bank with a **clear vision**: “Make banking joyful.”
- DBS created a best-in-class **platform-operating model** with joint leadership between business and technology with a firm focus on customers.
- It also made fundamental shifts in its **culture** and built-up in-house technology capabilities through innovative **recruiting and retention strategies**.

AI Applications in Business

- In a business context, AI, or **Artificial Intelligence**, refers to the field of computer science that focuses on creating **intelligent machines** capable of performing tasks that typically require human intelligence.
- AI systems can process large amounts of data, recognize patterns, learn from experience, and make decisions or predictions.

Examples

1. AI-powered **customer service** and chatbots

- Chatbots and Virtual Assistants are used by businesses to automate customer interactions, answer queries, and provide personalized recommendations
- assist with customer support, order tracking, and information retrieval, enhancing customer experiences and reducing response times

2. **Predictive analytics** and forecasting in marketing

- AI algorithms analyze customer data to predict customer behavior, preferences, and buying patterns
- enable businesses to personalize marketing campaigns, optimize pricing strategies, and target specific customer segments more effectively

Examples

3. Personalization and recommendation systems

- AI-powered recommendation systems are used by e-commerce platforms, streaming services, and content providers to suggest relevant products, shows, or content to users based on their preferences, purchasing history, or viewing behavior

4. Supply chain optimization

- AI algorithms analyze data related to inventory levels, demand forecasts, and logistical factors to optimize supply chain processes
- include inventory management, demand forecasting, route optimization, and supply chain risk assessment

Examples

5. Fraud detection and cybersecurity

- AI-based fraud detection systems analyze patterns and anomalies in transaction data to identify potential fraudulent activities
- help businesses detect and prevent fraud in areas such as credit card transactions, insurance claims, and financial transactions

6. AI in marketing and advertising

- AI-Powered Sales and CRM Tools: AI is used in sales and customer relationship management (CRM) tools to provide insights on customer behavior, identify potential leads, and automate sales processes
- AI can prioritize leads, recommend sales strategies, and provide sales representatives with relevant information during customer interactions

AI and Business Transformation

- AI-driven innovation and disruption
- Business models and strategies in the AI era
- AI-enabled decision-making and strategic planning
- AI and competitive advantage
- AI adoption and readiness assessment
- AI Governance and Regulation

Developing an AI strategy for businesses

- Identifying AI use cases and opportunities
- Data requirements and data governance
- AI project management and implementation challenges
- Change management and organizational readiness

Legal and regulatory considerations for AI

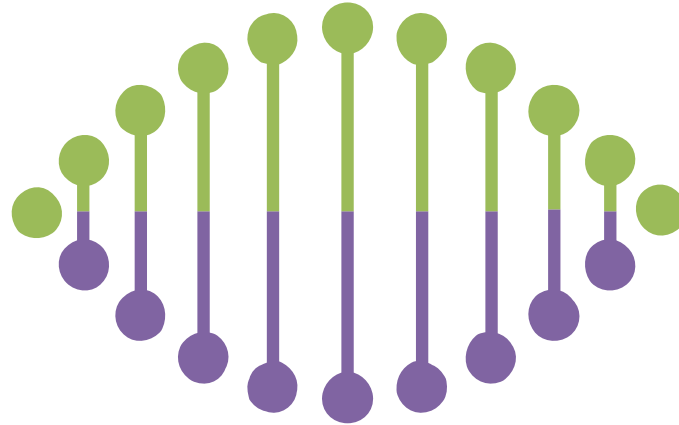
- AI Governance and Regulation
- Intellectual property and AI
- AI governance frameworks and best practices
- Responsible AI and accountability

Ethical and Social Implications of AI

- Ethical considerations in AI decision-making
- Bias and fairness in AI algorithms
- Privacy and data protection
- Impact of AI on employment and workforce
- AI and social responsibility
- AI Strategy and Implementation

Future Trends and Emerging Technologies

- Advances in machine learning and deep learning
- Natural language processing and conversational AI
- Robotics and automation
- AI in healthcare, finance, and other industries
- Ethical considerations in emerging AI technologies



AI Applications in Human Resources Management

Key Drivers of Changes

- Artificial Intelligence
- Robotics
- Cloud computing
- Machine learning
- Blockchain
- Internet of Things
- Cognitive technology

Artificial Intelligence (AI)

- **Enhanced Recruitment:**

AI-driven systems can analyze resumes and match candidates to job descriptions more efficiently.

- **Employee Onboarding:**

AI chatbots can assist new hires with onboarding processes, answering questions, and providing resources.

- **Performance Management:**

AI can analyze employee performance data to provide insights and suggest personalized development plans.

Robotics

- Automating Repetitive Tasks:

Robots can handle routine administrative tasks, allowing HR professionals to focus on strategic activities.

- Improved Efficiency:

Robotic Process Automation (RPA) can streamline processes like payroll and benefits administration.

Cloud Computing

- **Accessibility:**

Cloud-based HR solutions provide access to employee data from anywhere, facilitating remote work.

- **Scalability:**

Organizations can easily scale their HR operations up or down based on workforce needs.

Machine Learning

- **Predictive Analytics:**

Machine learning can forecast employee turnover, helping HR plan retention strategies.

- **Personalized Training:**

Learning platforms can adapt to individual employee needs, providing tailored training programs.

Blockchain

- **Secure Data Management:**

Blockchain can ensure secure and transparent management of employee records and contracts.

- **Credential Verification:**

Simplifies the verification of candidate credentials and work history, reducing hiring fraud.

Internet of Things (IoT)

- **Workplace Monitoring:**

IoT devices can monitor workplace conditions and employee health, enhancing well-being and productivity.

- **Real-Time Feedback:**

IoT can facilitate real-time feedback mechanisms, allowing for quicker adjustments to workplace policies and practices.

Cognitive Technology

- **Enhanced Decision-Making:**

Cognitive technologies can analyze vast amounts of data to inform HR decisions, from talent acquisition to succession planning.

- **Employee Engagement:**

Using sentiment analysis, HR can gauge employee satisfaction and engagement levels more effectively.

These digital transformation drivers are not only reshaping **HR operations** but also enhancing employee **experiences**, driving **efficiency**, and enabling data-driven decision-making. Organizations that leverage these technologies can gain a **competitive advantage** in talent management and organizational growth.

AI applications in Human Resources 1

AI is poised to change the future of HR forever, disrupting established views of work, talent, roles and skills.

1. Talent Acquisition and Recruitment:

- AI-powered candidate screening and selection
- Interviews conducted by a Robot
- Automated job posting and candidate sourcing
- Chatbots for candidate engagement and support
- Employee Onboarding and Engagement

2. AI-driven onboarding processes and personalized training

- AI-powered chatbots for employee support and information dissemination
- Employee sentiment analysis and engagement monitoring
- Performance Management and Evaluation

3. AI-based performance tracking and analysis

- Automated performance reviews and feedback generation
- Predictive analytics for identifying high-potential employees

AI applications in Human Resources 2

4. Learning and Development:

- Personalized learning paths and recommendations based on AI algorithms
- AI-enabled virtual training and simulations (CBT)
- Skill gap analysis and training needs identification
- HR Operations and Service Delivery

5. AI-powered HR service management and self-service portals

- Automated HR processes and workflows
- Natural language processing for HR inquiries and support
- Employee Well-being and Workforce Analytics

6. AI-driven employee sentiment analysis and well-being monitoring

- Predictive analytics for identifying burnout and attrition risks
- Workforce planning and optimization using AI algorithms

Why important?

- 76% of HR leaders believe that if their organization does not adopt and implement AI solutions, such as generative AI, in the next 12 to 24 months, they will be lagging in organizational success compared to those that do.
- CHROs must take a structured approach, using this three-step framework, to assess technology trends to be able to make an effective decision on whether to adopt new AI solutions into HR.

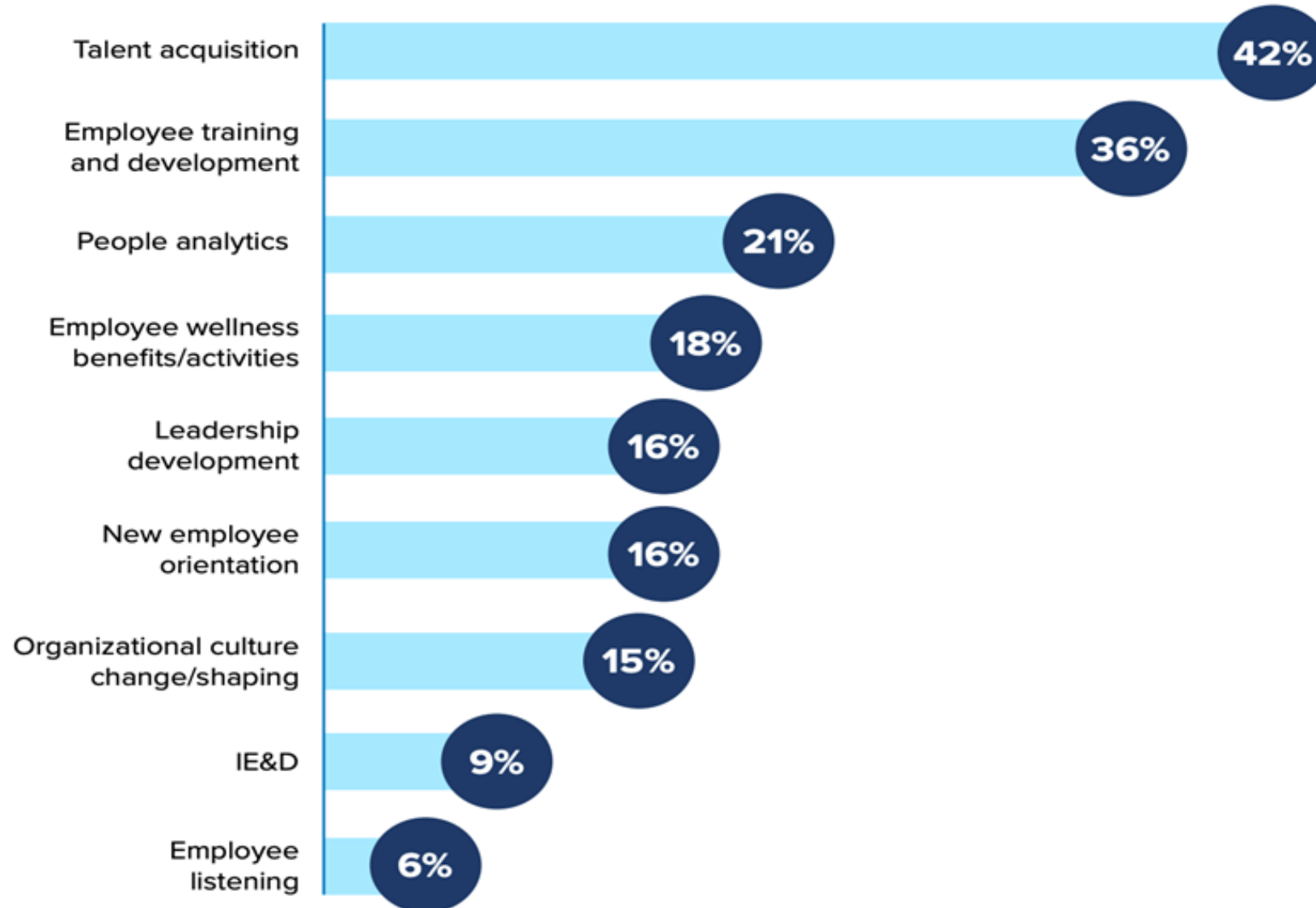
<https://www.gartner.com/en/human-resources/topics/artificial-intelligence-in-hr>

- the majority of the 250 HR leaders surveyed said they are already using AI across HR functions like employee records management (78 percent), payroll processing and benefits administration (77 percent), recruitment and hiring (73 percent), performance management (72 percent), and onboarding new employees (69 percent).

https://eightfold.ai/wp-content/uploads/2022_Talent_Survey.pdf

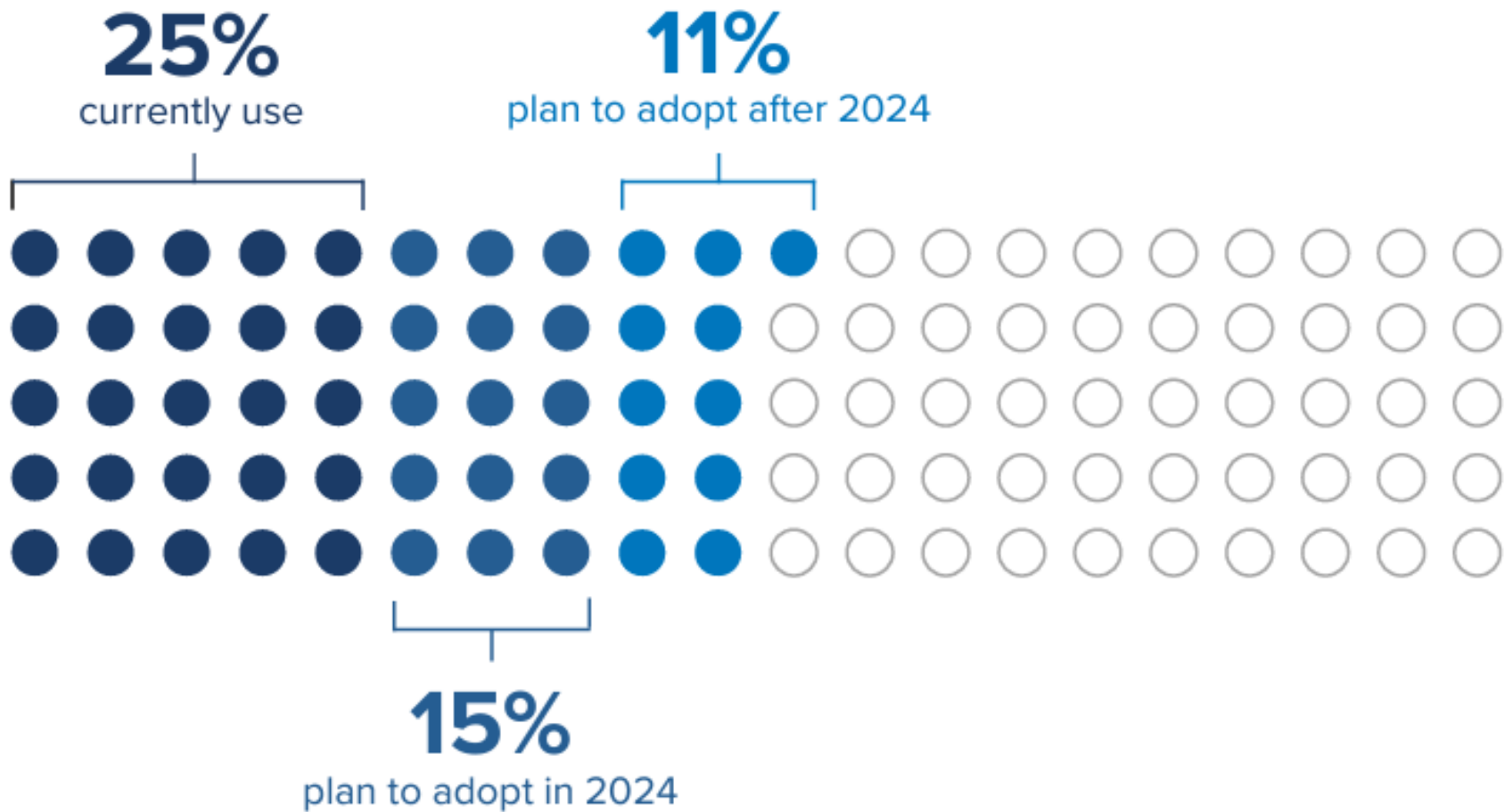
SHRM (2023). SHRM State of the Workplace Report 2023-24

For which HR functions do you use AI?



SHRM (2023). SHRM State of the Workplace Report 2023-24

By 2025, half of HR departments could be using AI:



Pros in AI adoption

- ✓ Automation of repetitive tasks
- ✓ Increase efficiency and reduce cost for talent acquisition
- ✓ Fewer human errors
- ✓ Reduction of human bias
- ✓ Enhanced decision-making
- ✓ More and faster insight from data
- ✓ 24 x 7 availability
- ✓ Improvement of employer branding

Cons in AI adoption

- Over-filtering the “right” candidates
- Algorithms bias
- Data risks
- Ethics and legal risks
- Privacy

Best Practice: Hilton Worldwide

Hilton is a global hospitality company. Over 6000 hotels; over 1.4 million employees internationally (Zhang, 2023)

Results:

- Speed up the process of **resume screening** (within 7 days recruiting time) (AI, 2024)
- Chatbot reduced the need for recruiters to handle call center recruiting by 23%

AI adoption in recruitment uses **AI chatbots for candidate**

Key of success:

- ✓ Alignment with **corporate strategic goal**
- ✓ Customized unique AI Algorithm for the organization
- ✓ Predictive hiring analytics for success forecasting

AI, L. (2024). Hilton: Unleashing the power of AI, finding the perfect culture fit. <https://medium.com/@LeapIn.io/hilton-unleashing-the-power-of-ai-finding-the-perfect-culture-fit-4d726c17fa70>

Zhang, J. (2023). Analysis of Strategic Human Resource Management Practices. *Frontiers in Business, Economics and Management* <https://doi.org/10.54097/fbem.v8i3.7872>

3-Step Approach to Assess AI Adoption in HR



Source: Gartner
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Gartner®

Step One - Distinguish Reality from Myth

Myth one - Tech will replace employees when it performs better than they do in current tasks.

Reality - AI tools are designed to enhance human capabilities and can be useful in delegating tasks. Technology will be pervasive in most employees' activities instead of replacing employees altogether.

Myth two - HR leaders are holding back on AI-powered tool implementation because of concerns.

Reality - Despite data privacy, bias and ethical concerns, AI is being deployed at a rapid pace.



3-Step Approach to Assess AI Adoption in HR

52% of HR leaders participating in a June 2023 Gartner benchmarking session stated they were exploring potential use cases and opportunities when it came to generative AI (a subset of broader AI).

3-Step Approach to Assess AI Adoption in HR (2)

Step Two Establish the potential of AI and its benefits for HR

- The next step will involve HR leaders establishing the true potential benefits of AI and, most importantly, aligning potential use cases to organizational goals.
- Focus on how AI will help alleviate any functional pains and meet your goals by allowing you to perform activities better, faster and cheaper.

3-Step Approach to Assess AI Adoption in HR (3)

Step Three Assess and score against success criteria

- The final step includes assessing and scoring AI solutions against key success criteria to determine if adoption should go ahead or not.
- Each organization will have different criteria, but some of the key areas HR leaders should take into consideration include governance, workforce readiness, risks and ethics, and the vendor landscape.

Some sources of references

- Artificial intelligence and a new era of human resources – IBM
<https://www.ibm.com/blog/artificial-intelligence-and-a-new-era-of-human-resources/>
- AI in HR: A Guide to Implementing AI in Your HR Organization
<https://www.gartner.com/en/human-resources/topics/artificial-intelligence-in-hr>
- Eightfold AI's report The Future of Work: Intelligent by Design
https://eightfold.ai/wp-content/uploads/2022_Talent_Survey.pdf
- Ways AI is Changing HR Departments
<https://www.businessnewsdaily.com/how-ai-is-changing-hr>

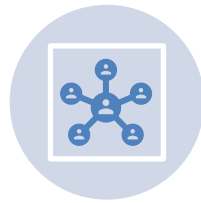
AIGC / ChatGPT



Future of Work



Technological skills: digital literacy, coding, data analysis, artificial intelligence, etc.



Social skills: communication, collaboration, empathy, intercultural understanding, etc.



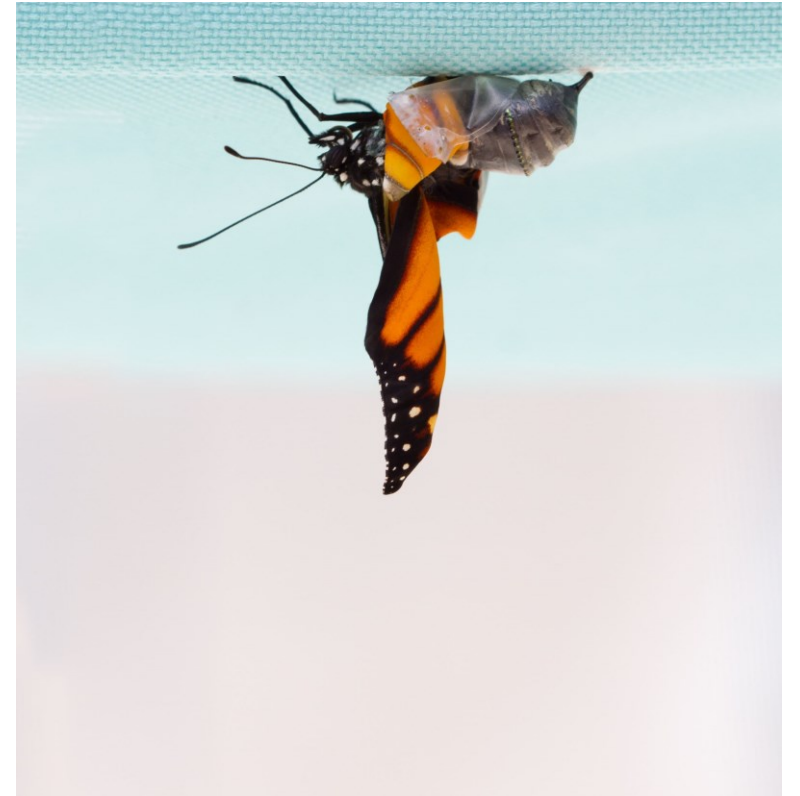
Higher cognitive skills: critical thinking, creativity, problem solving, learning to learn, etc.

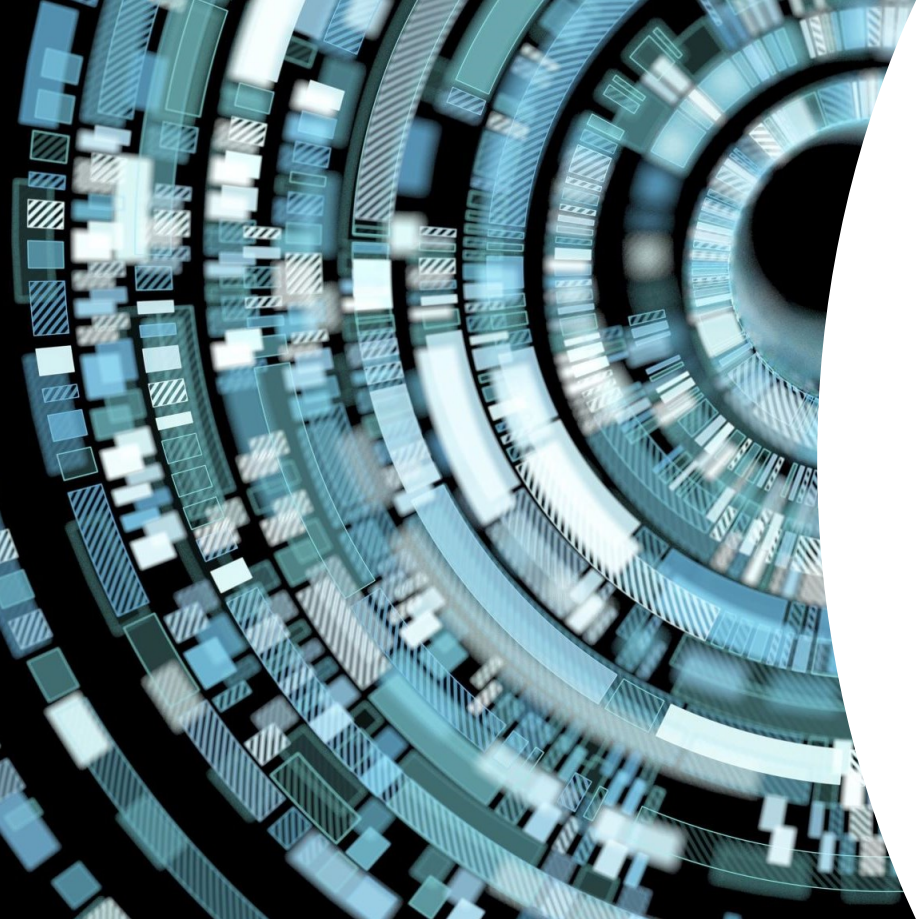
Everything Change

“AI is the next big thing to change everything. This time I believe it. Why? AI's impact is across systems.”

George Siemens (April 2023) SAIL: Everything changes.

<https://buttondown.email/SAIL/archive/sail-everything-changes/>





What is AIGC?

AI Generative Content

- refers to content that is created or generated using artificial intelligence (AI) techniques
- involve using **AI algorithms and models**, such as **deep learning** and **natural language processing**, to generate text, images, videos, or other forms of content
- can be applied in various domains, including art, media, marketing, and entertainment.
- AI can generate realistic images, create music compositions, write articles or stories, and even produce videos

What is AIGC?

- In the **context of art**, AI generative content can be used to create unique and original **artworks** based on patterns and styles learned from existing works. It allows artists to explore new creative possibilities and experiment with unconventional ideas.
- In **marketing and advertising**, AI generative content can be leveraged to **automate content creation for social media**, personalized advertisements, or product descriptions. AI algorithms can generate tailored content based on user preferences, demographics, or other relevant data.



Concerns and Challenges



However, it's important to note that AI generative content raises **ethical and legal considerations**.



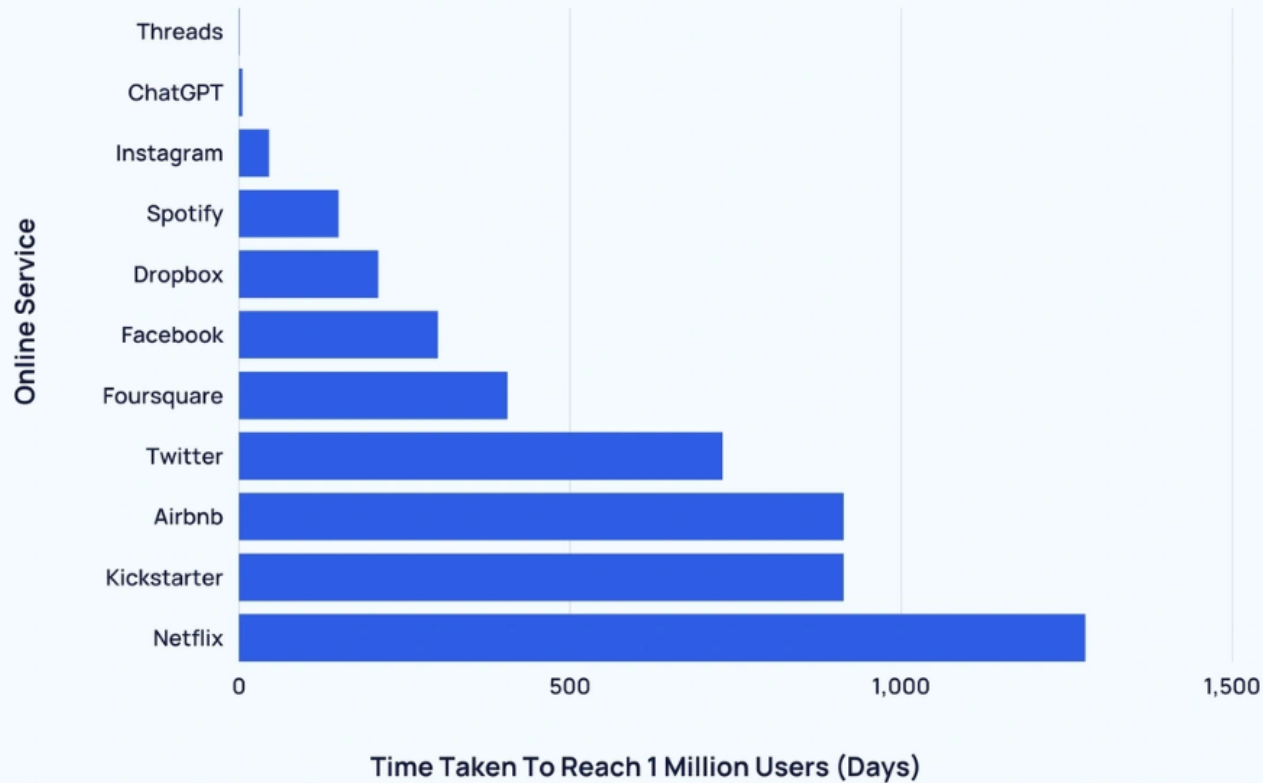
There are concerns about **intellectual property rights**, authenticity, and the potential for misuse or manipulation of generated content.



As AI technology advances, it is **essential to address** these challenges and ensure responsible and ethical use of AI generative content.

What is ChatGPT?

Time taken to reach 1 million users



According to OpenAI, it takes 5 days for **ChatGPT** to reach 1 million users (launched in Nov 2022)

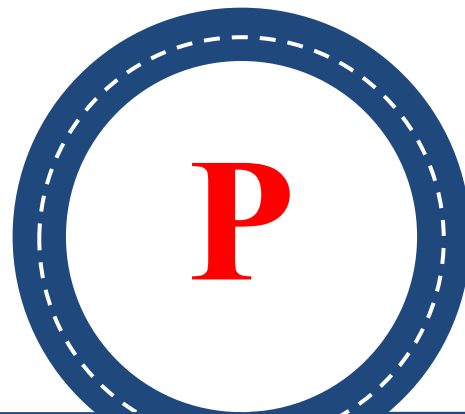
- two months after its launch, reached 100 million monthly active users in January 2023
- has around 180.5 million users on 30 Nov 2023

ChatGPT



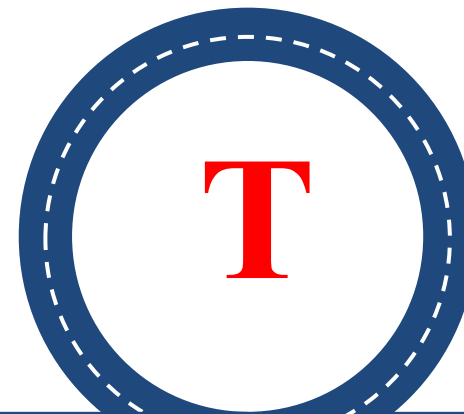
Generative

G is the basic form of the
model



Pre-training

P is the core idea



Transformer

T is the core
architecture

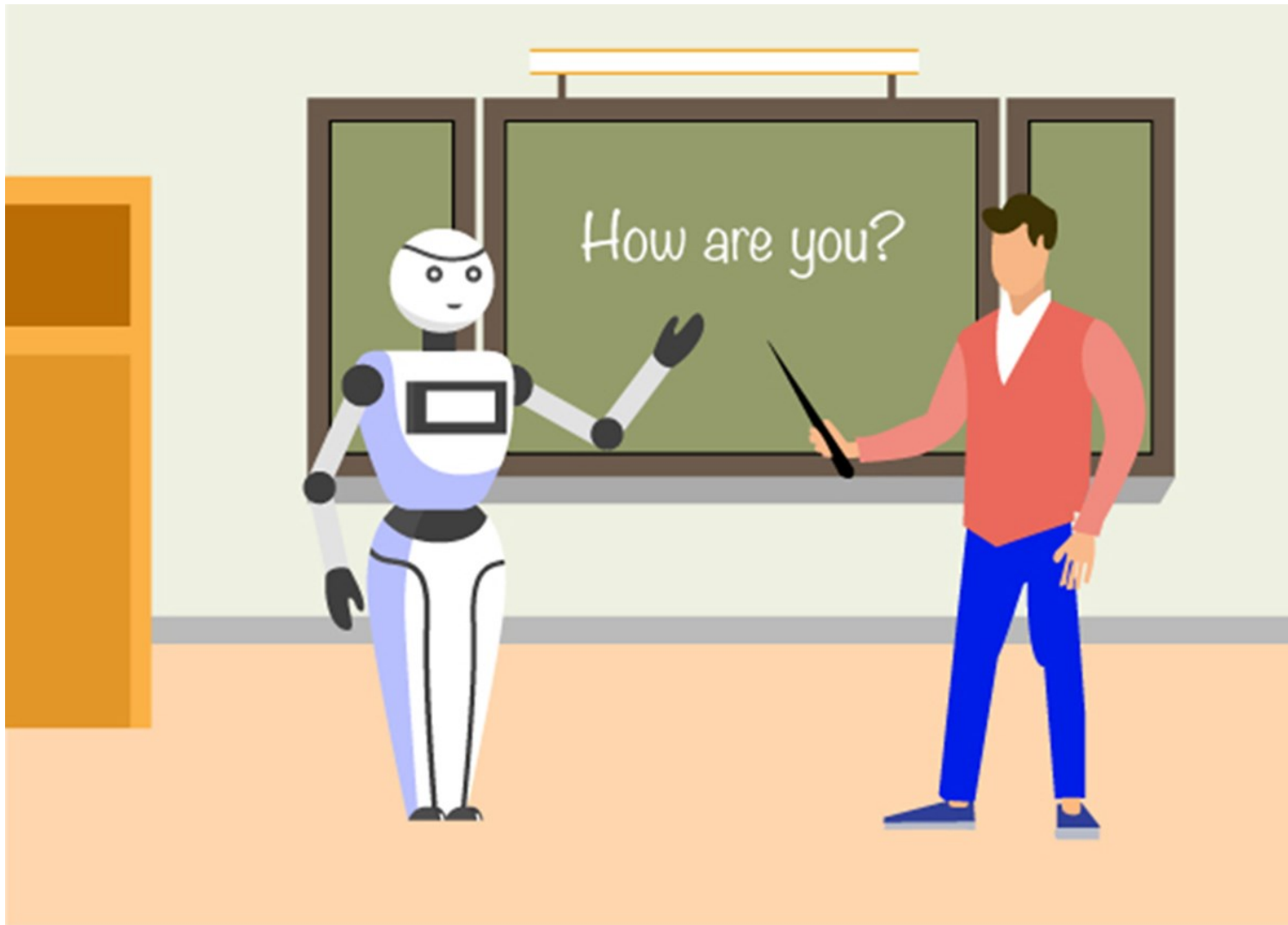
A Generative Pre-trained Model

Classic Two-stage Training Strategy of Pre-training + Feedback Reinforcement

Pretraining



Reinforcement
Learning from
Human Feedback



Reinforcement Learning from Human Feedback (RLHF)

What is ChatGPT



- a **language model** developed by OpenAI
- part of the GPT (Generative Pre-trained Transformer) series, which are **deep learning** models designed to generate human-like text based on given prompts or inputs
- specifically focuses on generating **conversational responses**
- the model is trained using a vast amount of text data from the internet, allowing it to learn patterns, grammar, and context in order to generate coherent and contextually relevant responses.
- utilize the transformer architecture, which enables it to **process** and **generate text** in a parallel and efficient manner.

What is ChatGPT



- ChatGPT is designed to understand and respond to a wide range of **conversational prompts or queries**, making it suitable for chatbot applications and interactive dialogue systems.
- engage in **back-and-forth conversations**, provide information, answer questions, and even exhibit a sense of personality.
- while ChatGPT can generate impressive responses, it can also **produce incorrect or nonsensical answers**.
- the responses are based on patterns and information it has learned from training data, but it **does not possess genuine understanding or knowledge**.

EdUHK Releases Pedagogical Approaches on AI Tools to Promote Self-regulated Learning (23 Mar 2023)

released a set of **pedagogical approaches** on the use of Artificial Intelligence (AI)-enabled generative tools

For **Faculty**:

- encourage them to enhance learning and teaching efficacy through the use of the new technology
- they should use their professional judgement and work with AI-enabled generative tools in teaching and learning, using detecting tools to ensure compliance with academic integrity



EdUHK Releases Pedagogical Approaches on AI Tools to Promote Self-regulated Learning (23 Mar 2023)

For Students:

- considering that these tools can be instrumental in nurturing **independent** and **innovative thinking**, the University strives to **guide students to use them with a positive attitude**
- students may **make use** of AI-enabled generative tools in their **coursework**, as long as they make a declaration and articulate their reflections during the learning process

EdUHK Releases Pedagogical Approaches on AI Tools to Promote Self-regulated Learning (23 Mar 2023)

- Plan to incorporate AI elements into the University's General Education curriculum, enabling students to build an **ePortfolio** (3 credit points) with support from AI tools.

6-P pedagogical approach

aims to facilitate the assessment of self-regulated learning:

1. **Plan:** Plan the content and structure of the writing to effectively respond to an issue, research question or problem. This corresponds to the forethought stage of **self-regulated learning**, where students set goals and plan their way forward;
2. **Prompt:** Generate **questions for inquiry** and prompts using text-based generative AI tools, which provide resources for thought, discussion and further exploration;
3. **Preview:** Ensure the output from the tools is previewed, checked for **accuracy** and screened for discrepancies. Students should think critically when examining the tools' output, supplement the output with additional knowledge and information, search for other supporting literature, and provide alternative views or arguments;
4. **Produce:** Produce the written content by **synthesising** information from the tools and other academic resources, together with the individual views and personal insights of the students;
5. **Peer Review:** Polish the article with peers and ensure that the content and supporting references are reasonable;
6. **Portfolio Tracking:** Integrate students' **reflections** on the writing and learning processes and the formulation of strategies into future writing and learning tasks.

Let's read – Article 1

Noy, Shakked and Zhang, Whitney, **Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence** (March 1, 2023).

Available at SSRN: <https://ssrn.com/abstract=4375283> or <http://dx.doi.org/10.2139/ssrn.4375283>

Abstract

We examine the productivity effects of a generative artificial intelligence technology—the assistive chatbot ChatGPT—in the context of **mid-level professional writing tasks**. In a preregistered online experiment, we assign occupation-specific, incentivized writing tasks to **444 college-educated professionals**, and randomly expose half of them to ChatGPT. Our results show that ChatGPT substantially raises average productivity: time taken decreases by 0.8 SDs and output quality rises by 0.4 SDs. Inequality between workers decreases, as ChatGPT compresses the productivity distribution by **benefiting low-ability workers more**. ChatGPT mostly **substitutes for worker effort** rather than complementing worker skills, and **restructures tasks towards idea-generation and editing and away from rough-drafting**. Exposure to ChatGPT **increases job satisfaction** and **self-efficacy** and heightens both concern and excitement about automation technologies.

- Keywords: artificial intelligence, generative AI, labor markets, productivity

Article 2

Luckina *et al.* (2022). **Empowering educators to be AI-ready.**

Computers and Education: Artificial Intelligence

Available at: <https://doi.org/10.1016/j.caeai.2022.100076>

“AI Readiness is about helping people to understand enough about AI to make good decisions about procuring and using AI to meet their particular needs.”

Luckin et al. (2022)

Abstract

In this paper, we present the concept of **AI Readiness**, along with a framework for developing AI Readiness training. 'AI Readiness' can be framed as a contextualised way of **helping people to understand AI**, in particular, data-driven AI. The nature of AI Readiness training is not the same as merely learning about AI. Rather, AI Readiness **recognises the diversity of the professions, workplaces** and sectors for whom AI has a potential impact. For example, AI Readiness for lawyers may be based on the same principles as AI Readiness for Educators. However, the details will be contextualised differently. AI Readiness recognises that such contextualisation is not an option: it is essential due to the multiple intricacies, sensitivities and variations between different sectors and their settings, which all impact the application of AI. To embrace such contextualisation, AI Readiness needs to be an **active, participatory training process** and aims to empower people to be more able to leverage AI to meet their needs. The text that follows focuses on AI Readiness within the **Education and Training sector** and starts with a discussion of the current state of AI within education and training, and the need for AI Readiness. We then problematize the concept of AI Readiness, why AI Readiness is needed, and what it means. We expand upon the nature of AI Readiness through a discussion of the difference between human and Artificial Intelligence, before presenting a **7-step framework** for helping people to become AI Ready. Finally, we use an example of AI Readiness in action within Higher Education to exemplify AI Readiness.

Article 3

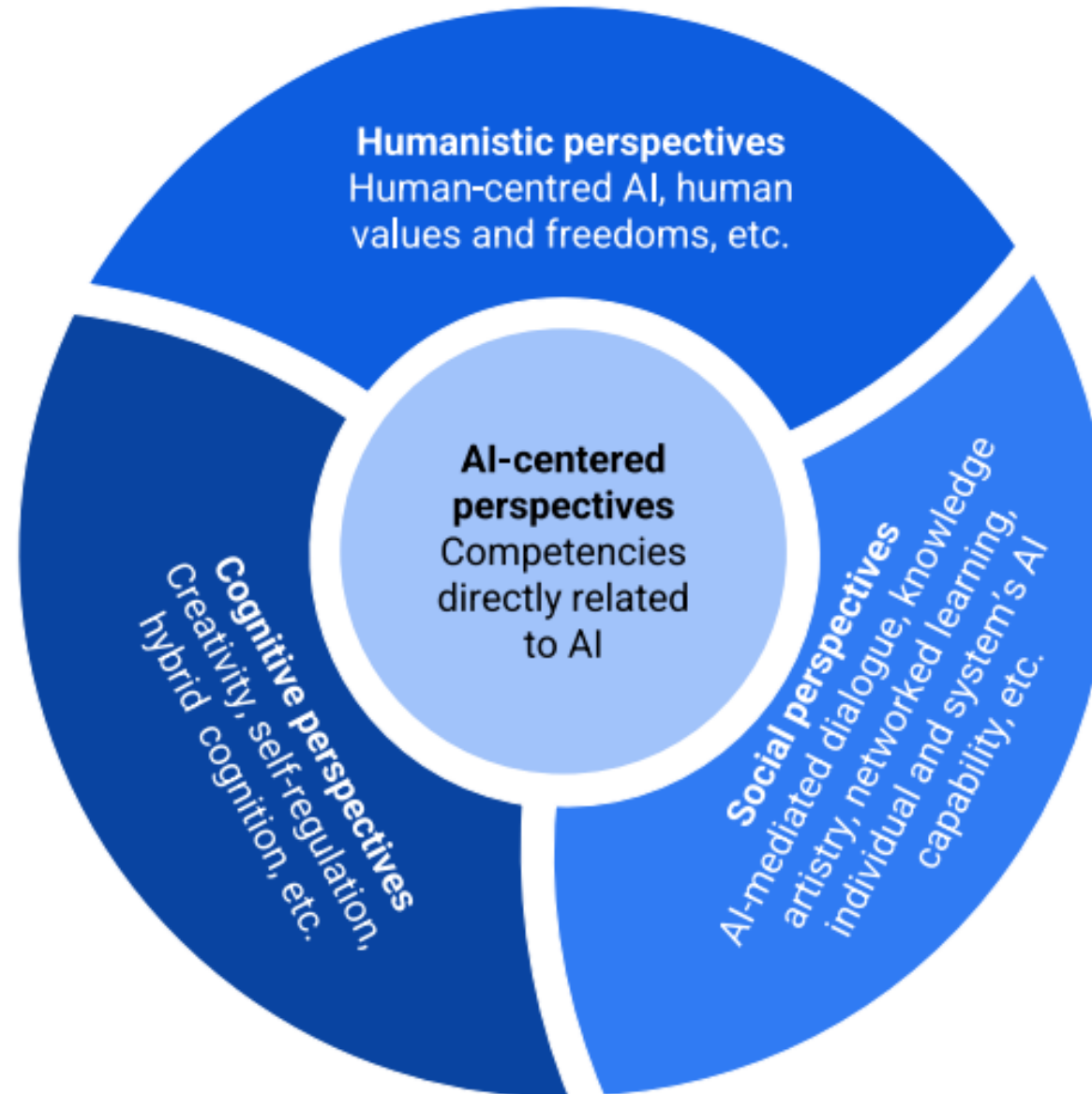
Lina Markauskaite *et al.* (2022). **Rethinking the entwinement between artificial intelligence and human learning: What capabilities do learners need for a world with AI?** *Computers and Education: Artificial Intelligence*

Available at: <https://www.sciencedirect.com/science/article/pii/S2666920X2200011X>

Abstract

The proliferation of AI in many aspects of human life—from personal leisure, to collaborative professional work, to global policy decisions—poses a sharp question about how to prepare people for an interconnected, fast- changing world which is increasingly becoming saturated with technological devices and agentic machines. **What kinds of capabilities do people need** in a world infused with AI? How can we **conceptualise** these capabilities? How can we help learners develop them? How can we empirically study and assess their development? With this paper, we open the discussion by adopting a **dialogical knowledge-making approach**. Our team of **11 co-authors** participated in an orchestrated written discussion. Engaging in a semi-independent and semi-joint written polylogue, we assembled a pool of ideas of what these capabilities are and how learners could be helped to develop them. Simultaneously, we discussed conceptual and methodological ideas that would enable us to test and refine our hypothetical views. In synthesising these ideas, we propose that there is a need to move beyond AI-centred views of capabilities and consider the **ecology of technology, cognition, social interaction, and values**.

Synthesis of different perspectives towards the capabilities for a world with AI



If you thought of AI as a distant thing that would not touch how we work every day, I hope you see that this is not the case. Between the expanding capabilities of **GPT-4**, and the soon-to-be everywhere **Microsoft Copilot**, work is going to start changing in a **matter of months**, not years. There isn't really time to prepare, and no new technologies, beyond the ones deployed right now, are required. If you thought that things with AI were weird already, they are about to get weirder.

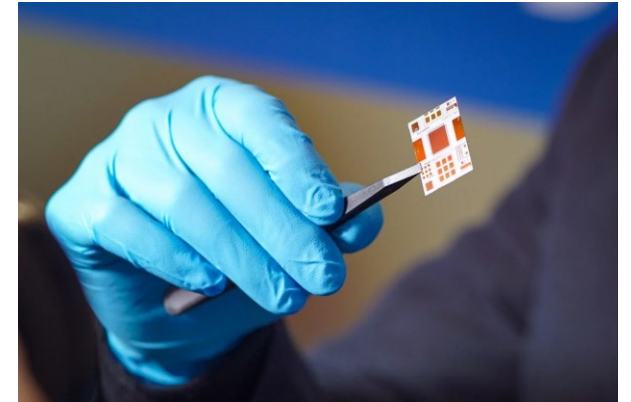
I will offer my usual advice: **embrace these systems**. They offer both exciting opportunities and the possibility of worrying change, but they are going to be ubiquitous regardless of how we feel about them. So, the best way to adjust to a world of AI is to start using it whenever you can, for whatever tasks you can. It is the only way to learn what these systems do well, what they do badly, and how you will fit into the world of AI that is already here. I think you will find many ways in which they expand your capabilities and relieve you of your most annoying work, so that you can focus on the things that make you unique as a human being in a world of rapidly advancing AI.

Ethan Mollick is a professor at the Wharton School of the University of Pennsylvania (2 May 2023)

One news in SCMP (28 Dec 2023)

Hong Kong researchers seek key to advanced AI chip within original model – the human brain

- Team aims to develop advanced AI capable of lifelong learning and performance of tasks, feats at which the human brain excels
- Scientist leading quest says answer could lie in the memristor, an emerging memory device that mimics the brain's storage and processing function



Future memristor chips may be able to **offload AI tasks from data centres to smartphones and watches** with great energy efficiency, be used in subdermal health-monitoring implants and help to speed up virus genome sequencing. Photo: HKU

Another news in Ming Pao (29 Dec 2023)

A source of inspiration for housing estate renovations: AI inspires imagination for the redevelopment of Choi Hung Estate

屋邨改造靈感之泉 AI激發彩虹邨重建想像

The government announced earlier that Choi Hung Estate will be redeveloped, and about 10 public housing estates have been planned for redevelopment. With the popularity and rapid development of artificial intelligence (AI) in recent years, this semester I worked with Christian J. Lange, associate professor of the Department of Architecture at HKU, and students from the Master of Architectural Design Program to discuss how to use AI to inject new life into Hong Kong's old public cities. (Adapted from Mono Tung)



From Research to Practice

- explore the **process** of taking academic research findings and effectively applying them in real-world business settings
- focus on **bridging the gap** between theoretical knowledge and practical application
- the **skills and insights** necessary to translate research outcomes into actionable strategies and decisions within your professional roles

From Research to Practice

1. Understanding the Research-Practice Gap

- research-practice gap and its significance in the business context
- challenges that exist in transferring research findings into practical applications.

2. Evaluating Research Relevance

- how to critically evaluate academic research and determine its relevance to real-world business problems and opportunities
- Discuss criteria for assessing the applicability and validity of research studies.

From Research to Practice

3. Knowledge Translation and Implementation

- Explore strategies for effectively translating research insights into actionable practices. Discuss techniques for interpreting and synthesizing research findings, adapting them to specific business contexts, and overcoming potential barriers to implementation.

4. Practical Application of Research

- Case studies, examples, and practical exercises that demonstrate how research can be applied to solve business challenges. Illustrate how research-informed decision making can lead to improved organizational outcomes, innovation, and competitive advantage.

From Research to Practice

5. Stakeholder Engagement and Communication:

- Emphasize the importance of engaging stakeholders, such as executives, managers, and employees, in the research-to-practice process. Teach effective communication techniques for conveying research findings, aligning stakeholders' understanding, and gaining support for implementing evidence-based practices.

6. Organizational Learning and Knowledge Management:

- Discuss how organizations can develop a culture of learning and knowledge sharing, where research findings are integrated into ongoing practices and processes. Explore mechanisms for capturing, disseminating, and utilizing research-based knowledge within the organization.

From Research to Practice

7. Ethical Considerations

- Address ethical considerations in the research-to-practice process, such as protecting confidentiality, respecting intellectual property rights, and ensuring the responsible use of research findings in business decision making.

8. Reflection and Continuous Improvement

- reflect on their own experiences and identify opportunities for applying research insights in their professional roles. Discuss strategies for continuous learning, feedback loops, and iterative improvement based on evidence-based practices.

From Research to Practice

9. Collaboration with Academia

- Explore the potential for collaboration between academia and industry, such as research partnerships, knowledge exchange programs, or guest lectures from researchers. Highlight the benefits of bridging the research-practice divide through mutual engagement.

Let's watch

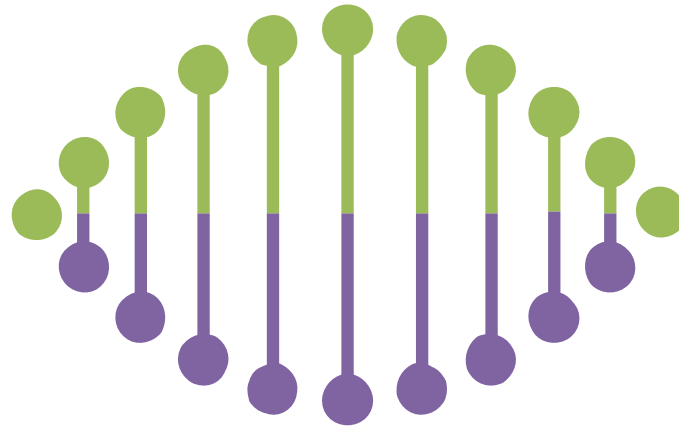
The Truth About Tesla's Global Supply Chain!

<https://www.youtube.com/watch?v=TqFD1zHcS3o>

Mainland tea beverage giant MIXUE plans Hong Kong listing

<https://www.chinadailyhk.com/article/369536>





How to do a Pilot Study

What is a Pilot Study

- a **small-scale** experiment or set of observations undertaken as a **preliminary** research project conducted before the main study to test and refine research methods, procedures, and data collection instruments.

Aims to identify **potential issues**, **challenges**, and **areas of improvement** in the research design, allowing researchers to make necessary **adjustments** before proceeding with the full-scale study.



Reasons for conducting a Pilot Study

1. Determine the **feasibility** of the study (estimate time and applicability of tools of the study)
2. Test a **new instrument** or to evaluate an existing one.
3. Gain **experience** with the methodology
4. Identify potential problems in **data collection**
5. Understand participants response to data collection

Objectives of a Pilot Study

1. Test Feasibility

- help determine the feasibility of the research project by assessing the practicality of research methods, procedures, and data collection techniques
- evaluate whether the chosen methods can be implemented effectively within the available resources, time constraints, and ethical considerations

2. Refining Research Design

- identify and address any shortcomings or limitations in the research design, such as ambiguities in research questions, inconsistencies in data collection instruments, or unforeseen logistical challenges
- provide an opportunity to **refine** and **improve** the research design based on the pilot findings.

Objectives of a pilot study

3. Assessing Data Collection Instruments

- evaluate the reliability and validity of data collection instruments, such as surveys, interview guides, or observation protocols.
- identify any issues in instrument design, wording, or response options, allowing researchers to make necessary modifications to enhance data quality and accuracy.

4. Testing Procedures and Logistics

- test research procedures, protocols, and logistics, such as participant recruitment, data collection logistics, or data management processes
- identify potential bottlenecks, logistical challenges, or practical issues that may arise during the main study, enabling researchers to streamline processes and ensure smooth execution.

Objectives of a pilot study

5. Sample Size Estimation

- provide insights into the variability of data, effect sizes, and potential attrition rates
- such information can be used to estimate an appropriate sample size for the main study, ensuring that it is adequately powered to detect meaningful effects or relationships

6. Gaining Experience and Training

- serve as a valuable learning experience, allowing the researcher to gain familiarity with research methods, data collection procedures, and analysis techniques
- provide an opportunity to refine the research skills and build confidence before embarking on the larger-scale study

Advantages of conducting a Pilot Study

- Help to **sharpen the focus** of the study
- Ascertain the feasibility
- **Improve** the design of the surveys, interviews or other types of field work
- Avoid time and money being wasted on inadequately designed surveys or interviews, etc.
- Questions were tested to make sure they make sense to respondents
- Help to develop **research skills** of the researchers

Ethical consideration

- strictly follow ethical guidelines and regulations relevant to academic research, such as obtaining **informed consent** and ensuring participant confidentiality
- address potential ethical challenges specific to the research context, such as working with industry partners or handling sensitive data
- learn practical issues when navigating ethical issues and obtaining necessary ethical approvals

- Overall, the primary objective of a pilot study is to improve the quality and efficiency of the main research project by **identifying** and addressing **potential issues** and challenges.
- It helps researchers **minimize errors**, enhance validity and reliability, and increase the likelihood of obtaining meaningful and reliable research findings.

Steps to conduct a Pilot Study

1. Define the Purpose and Scope of the Pilot Study

- clarify the specific **objectives** of the pilot study, such as testing research methods, refining data collection instruments, or assessing feasibility
- determine the scope of the pilot study, including the **target population**, **sample size**, and **time frame**



2. Identify the Research Questions

- formulate research questions specific to the pilot study objectives.
- ensure that the research questions **align with** the larger research project and address the key areas of investigation

Steps to conduct a Pilot Study

3. Design the Pilot Study

- determine the appropriate research design, considering factors such as the nature of the research problem, available resources, and time constraints
- select the pilot study sample, ensuring it is **representative** of the larger study population
- decide on the data collection **methods** and **instruments** to be used, such as surveys, interviews, or observations



Steps to conduct a Pilot Study

4. Develop Data Collection Instruments

- create or **adapt** data collection instruments based on the research questions and objectives
- **pretest** the instruments with a small group of participants to identify any issues with clarity, comprehensibility, or response options.
- revise and **refine** the instruments based on the feedback received during the pretesting phase



Steps to conduct a Pilot Study

5. Conduct the Pilot Study

- recruit **participants** for the pilot study, ensuring they meet the specified criteria
- administer the data collection instruments to the pilot study participants
- **collect** the data according to the predetermined data collection procedures
- **document** any observations or issues encountered during data collection for later analysis and reflection



Steps to conduct a Pilot Study

6. Analyze the Pilot Study Data

- clean and organize the pilot study data for analysis
- conduct descriptive analysis to **summarize** the data and identify any **patterns** or **trends**
- consider whether the data collected during the pilot study is **sufficient** to answer the research questions or if **adjustments** are needed for the main study



Steps to conduct a Pilot Study

7. Evaluate and Reflect on the Pilot Study

- assess the strengths and weaknesses of the pilot study, including the research design, data collection instruments, and data analysis procedures
- **reflect** on the challenges, limitations, and unexpected issues encountered during the pilot study
- consider **potential modifications** or refinements to the research design, data collection instruments, or procedures based on the pilot study findings



Steps to conduct a Pilot Study

8. Make Adjustments for the Main Study

- based on the evaluation and reflection of the pilot study, make necessary **adjustments** to the research design, data collection instruments, or procedures for the main study
- address any identified issues or limitations to enhance the validity, reliability, and feasibility of the research project



Steps to conduct a Pilot Study

9. Document the Pilot Study Findings

- prepare a **report** summarizing the pilot study objectives, methods, results, and reflections.
- clearly outline any modifications or adjustments made based on the pilot study findings
- share the report with relevant stakeholders, such as the supervisor, for feedback and guidance
- can **incorporate** the results in the main research





-
- By following these detailed steps, you can effectively conduct a pilot study for your DBA research project.
 - Remember that the pilot study serves as a valuable **learning experience** and an opportunity to refine your research design before undertaking the main study.



What we have covered today

1. Some contemporary Management Topics
2. AI Applications – Business & Human Resources Management
3. How to do a Pilot Study

