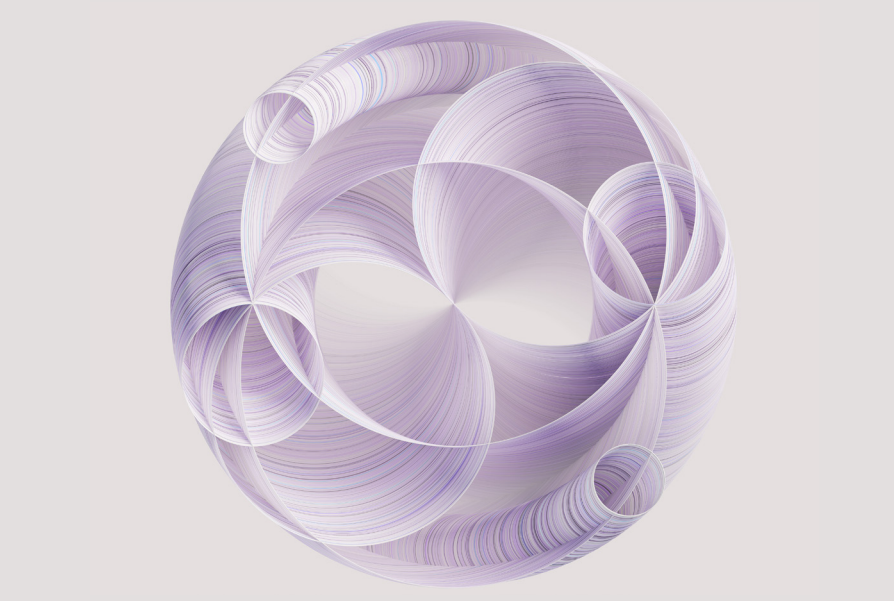
IBM AI Ethics Board

Key Performance Indicators for Augmenting Human Intelligence with AI

In 2023, the IBM AI Ethics Board published Augmenting Human Intelligence - the IBM Point of View, which operationalized IBM's first Principle of Trust and Transparency: AI should augment, and not replace human intelligence. At IBM, we put our principles into practice, and support our clients with integrating these principles into their products and solutions. The Key Performance Indicators (KPIs) proposed in the POV are guiding metrics that allow us to measure ourselves against our commitments. This document describes the real-world applications of these KPIs across our own organization and those of our clients.



Key Performance Indicator	Description	In Action
Learning capability amplification	Measuring the time taken to learn new tasks or adapt to changes in processes or environments before and after AI augmentation	At IBM, the introduction of AI to enhance learning through customized learning paths and personalized training programs based on individual needs, has helped accelerate strategic skill building across the organization. Within our own digital learning platform called Your Learning, AI-powered features include: • Recommendations for the most popular and relevant skills training by peer roles. • Targeted learning channels based on individual goals. • Chatbot to answer learning-related questions. IBM's AI-driven learning platform (visited by 98% of all IBM employees each quarter) is helping increase enrollments and course completions, thereby helping accelerate strategic skill acquisition across the organization.
Decision making improvement	Assessing the quality of decisions made, by considering the outcomes	AI can assist HR professionals with their decision-making process. For example, IBM client FloCareer set a goal of growing its staff by 10-20%, conducting 20,000 technical interviews per month. By integrating AI, the FloCareer team was able to free up time that was spent on mundane tasks to focus on relationship building with candidates. With the help of responsible AI and intelligent automation, they were able to improve productivity while delivering a positive candidate experience: "These platforms make the process of finding top talent much easier. Overall, they increase the effectiveness of the hiring process and streamline the recruitment workflow." – Nasar Mirza, Onboarding Manager, FloCareer.
Problem solving enhancement	Comparing the complexity and quantity of problems solved before and after AI augmentation, taking time into account	IBM's enterprise-wide Privacy and AI Management System (PIMS) underpinned by AI technology helps with IBM's compliance process to address an increasing complexity of governance, risk management, and compliance for AI systems proliferate. Before PIMS, IBM had a decentralized and manual process for assessing potential AI risks across business units. With over 5,500 enterprise applications and processes globally, this presented challenges in achieving transparency, managing risk, and tracking accountability. After implementing PIMS in 2023, IBM now has a unified platform that automatically tracks and monitors AI systems across the company. PIMS conducts continuous assessments of fairness, quality, concept drift, and other potential risks for models. It also imports the latest regulatory requirements and governance policies to help IBM determine if AI systems align with applicable requirements and policies. By centralizing and automating oversight of AI systems through PIMS, IBM more easily addresses multifaceted problems related to risk management and governance, enhancing IBM's institutional ability to develop AI responsibly.
Productivity increase	Learning capability amplification	AI can help accelerate productivity, boosting innovation. In partnership with IBM Consulting, Wintershall Dea, a leading European independent gas and oil company, established an AI Center of Competence while progressing multiple value-generating AI use cases that support efficient energy production. This allowed them to coordinate AI usage across the company. Wintershall Dea is now able to exchange more standardized data internally and externally than ever before, like automated data extraction from 2,000 PDF documents and more than 80 identified concepts across the company for AI use cases. In this example, IBM client Wintershall Dea scaled AI across their enterprise to help better capitalize on data and help drive process and production improvements. Not only did the use of AI helped improve productivity, but it also helped to protect the environment and make energy production safer and cleaner by using AI to help analyze data from subsea wells and detect potential leakages more accurately.

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AI adoption rate (voluntary)	The percentage of employees effectively using the AI systems in their workflows	According to IBM Global AI Adoption Index from 2023: "New research commissioned by IBM found that about 42% of enterprise-scale organizations (over 1,000 employees) surveyed have AI actively in use in their businesses. Early adopters are leading the way, with 59% of responding enterprises already working with AI intending to accelerate and increase investment in the technology. [...] Easier to use AI tools and the need to reduce costs and automate processes are driving AI adoption among surveyed companies." Companies and their stakeholders, including employees, are recognizing the value add of responsible AI adoption grounded in robust and holistic AI governance practices.
Task efficiency	Comparing task completion time and accuracy before and after AI implementation	AI can help automate analysis of customer complaints and help accelerate impactful remediation. For example, WindTRE, a leading Italian telecommunication company, worked with IBM Consulting and watsonx AI solutions to help optimize how complaints are handled to reduce the repetitive activities of its Service Desk and help accelerate customer results. A dedicated dashboard continuously shares performance, volumes and expected benefits which have helped to improve the effectiveness and efficacy of WindTRE's claims management and evolved operational mindset. WindTRE was able to optimize more than 120,000 reports, greatly reducing repetitive service desk activities, driving efficacy in claims management, and increasing response speed by 10x.
Error reduction	Tracking the number of errors or quality issues before and after AI augmentation	Implementing AI in the supply chain can help industries reduce errors. Parle, one of the largest-selling biscuit brand in India, uses IBM's AI-powered supply chan suolutions to help optimize their production and distribution processes. With the help of IBM's AI technology, Parle was able to identify a potential shortage of a key ingredient and adjust their production schedules, avoiding a costly delay in their supply chain. They were also able predict demand for their products more accurately, reduce waste, and improve their overall supply chain efficiency. This resulted in an improvement of forecast accuracy by 10% and a reduction in weighted average distance by 10%, making products available to customers faster.
Cost savings	Comparing operational costs before and after AI augmentation	AI solutions can help businesses accurately optimize customer-agent conversations within their contact centers and reduce operational costs. Bouygyes Telecom, a leading telecom provider in France, wanted to derive actionable insights from 8 million conversations between agents and customers. Bouygues Telecom was able to utilize IBM AI to help drive their strategic vision for contact center optimization, resulting in enhanced customer interactions and an operational savings projection of $5 million a year.
Customer satisfaction	Monitoring changes in customer satisfaction after AI augmentation	AI can help ace the digital fan experience, transforming data into insights as under the US Open Tennis tournament and the Wimbledon Champoinship partnerships with IBM. To help the US Open and Wimbledon stay on the cutting edge of the customer experience, IBM Match Insights provided AI-generated fact sheets to help fans stay up to speed on every singles match. IBM supplemented this with its Power Index, an AI-powered analysis of player performance, and AI Commentary highlight reels. Over the course of the 2023 US Open, match highlights with AI Commentary were viewed more than 2 million times.

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