

Balancing ethics and innovation: How to harness generative AI for business transformation

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*AI is projected to contribute **\$16 trillion** to the global economy by 2030, including a massive boost in productivity.*

Source: [PwC's Global Artificial Intelligence Study](#)

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Recognition



Reasoning

Traditional AI:

- Great at pattern recognition
- Based on machine learning models
- Go "data to model"

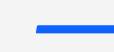
Generative AI:

- Great at reasoning
- Based on large language models
- Go "model to model"

*Generative AI is
reinventing core business
processes →*

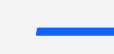
DIGITAL LABOR

Empower individuals to deliver faster outcomes.



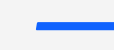
IT AUTOMATION

Achieve new levels of efficiency and resiliency.



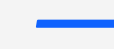
SECURITY

Expand visibility and accelerate response times.



SUSTAINABILITY

Capture new efficiencies with embedded sustainability.



APPLICATION MODERNIZATION

Build composable, API-based, and event-driven apps.

The popular generative AI use cases we're seeing today →

Customer service Empower customers to find solutions with easy, compelling experiences Automate answers with 95% accuracy	HR automation Reduce manual work and automate recruiting, sourcing and nurturing job candidates Reduce employee mobility processing time by 50%	App modernization Generate code, tune code generation response in real time Deliver faster development output	Threat management Reduce incident response times from hours to minutes or seconds Contain potential threats 8x faster
Marketing Increase personalization, improve efficiency across the content supply chain Reduce content creation costs by up to 40%	Supply chain Automate source to pay processes, reduce resource needs and improve cycle times Reduce cost per invoice by up to 50%	IT automation Identify deployment issues, avoiding incidents, optimize application demand to supply Reduce mean time to repair (MTTR) by 50%+	Asset management Optimize critical asset performance and operations with sustainable outcomes Reduce unplanned downtime by 43%
Content creation Ex. Enhance digital sports viewing with auto-generated spoken AI commentary Scale live viewing experiences cost effectively	Planning and analysis Make smarter decisions, focus on higher value tasks with automated workflows and AI Process planning data up to 80% faster	AIOps Assure continuous, cost-effective performance and connectivity across applications Reduce application support tickets by 70%	Product development Ex. Expedite drug discovery by inferring structure with AI from molecular representations Faster and less expensive drug discovery
Knowledge worker Enable higher value work, improve decision making, and increase productivity Reduce 90% of text reading and analysis work	Regulatory compliance Support compliance based on requirements / risks, proactively respond to regulatory changes Reduce time spent responding to issues	Data platform engineering Redesign the approach for data integration using generative AI Reduce data integration time by 30%+	Environmental intelligence Proactively plan and manage impact of severe weather and climate Increase manufacturing output by 25%

IBM is transforming our business with generative AI →

Talent and HR

Simplify, standardize, and automate HR promotions and task processing with the “AskHR” tool, built on top of Workday, solving 94% cases through a virtual agent.

Marketing

Generate IBM-branded content through a creative agent built on top of an Adobe marketing stack that leverages a deep IBM brand library of assets, images, and files.

Product documentation

Developed a search-and-answer feature for AI builders to build generative AI use cases.

CIO Office

Improve SRE productivity by extending self-service capabilities of CIO hybrid cloud with Ansible to deliver enterprise services.

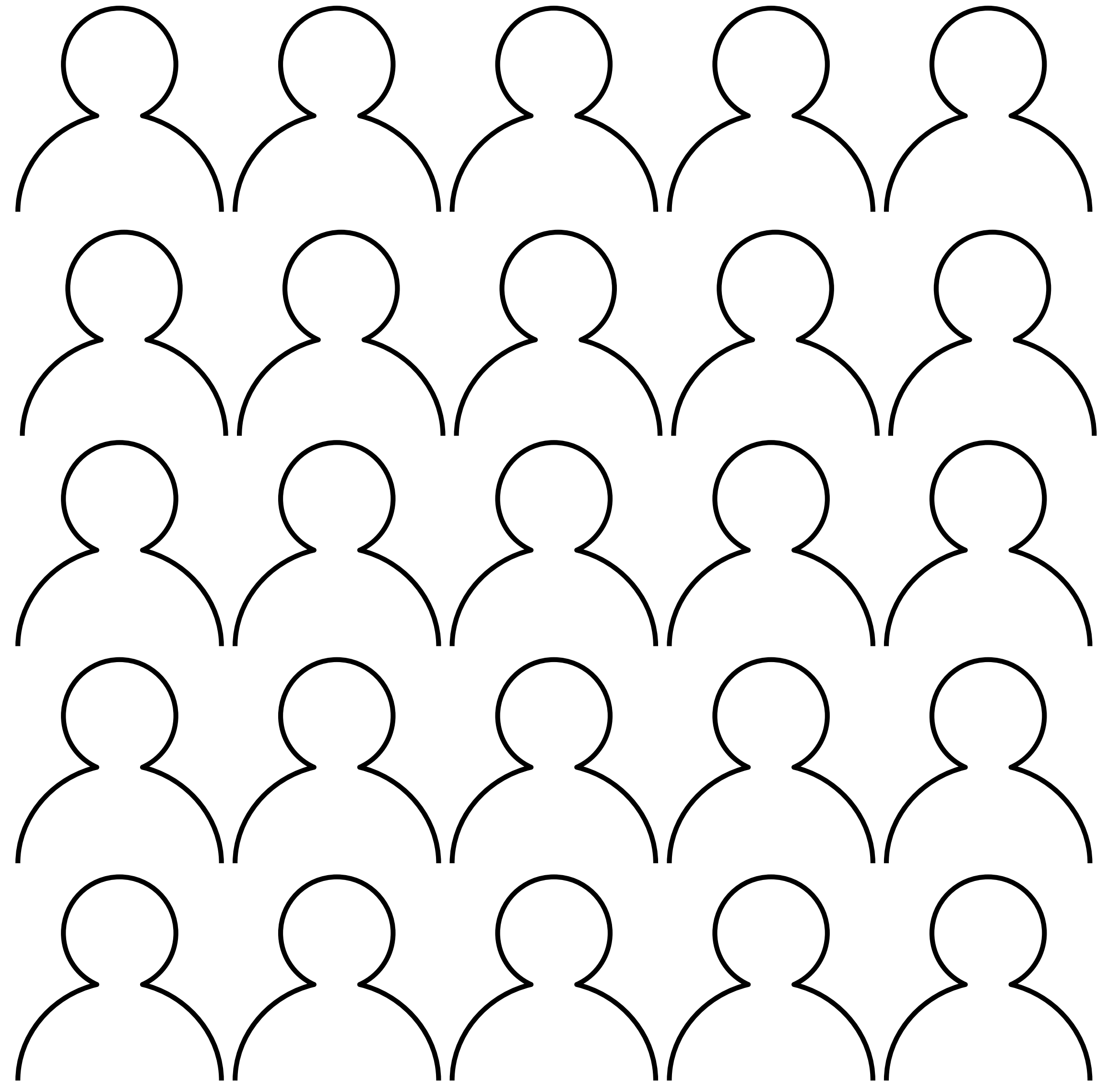
Software development

Leverage watsonx Code Assistant across Data and AI, Automation, Security and Sustainability portfolios to code more effectively.

Sales enablement

Help IBM sellers and business partners find the right materials for their clients with the “AskSales” tool built on top of Seismic.

*The problem is, 80% of
business leaders
acknowledge ethical
concerns with adopting
generative AI.**



As leaders look to scale AI, *trust* will be critical.

CIO JOURNAL

Rise of AI Puts Spotlight on Bias in Algorithms

As use of artificial intelligence becomes more widespread, businesses are still struggling to address pervasive bias

Amazon scraps secret AI recruiting tool that showed bias against women

Apple Card algorithm sparks gender bias allegations against Goldman Sachs

YouTube sued for using AI to racially profile content creators

OpenAI's Sam Altman Urges A.I. Regulation in Senate Hearing

Governments worldwide grapple with regulation to rein in AI dangers

AI Regulation Is Coming

How to prepare for the inevitable by François Cadelon, Rodolphe Midas De Bondt, and Theodoros Evgeniou

More Than One in Three Firms Burned by AI Bias

Factbox: Governments race to regulate AI tools

Reuters

Algorithmic bias isn't just unfair — it's bad for business

If it's not deployed wisely, artificial intelligence can turn consumers off.

By Kalinda Ukanwa Updated May 23, 2021, 3:00 a.m.



U.S. Executive Order on the Safe, Secure, and Trustworthy Development and Use of AI

Establishes new standards for AI safety and security while protecting privacy and advancing equity and civil rights.

01

Develop standards, tools, and tests to help ensure that AI systems are safe, secure, and trustworthy.

02

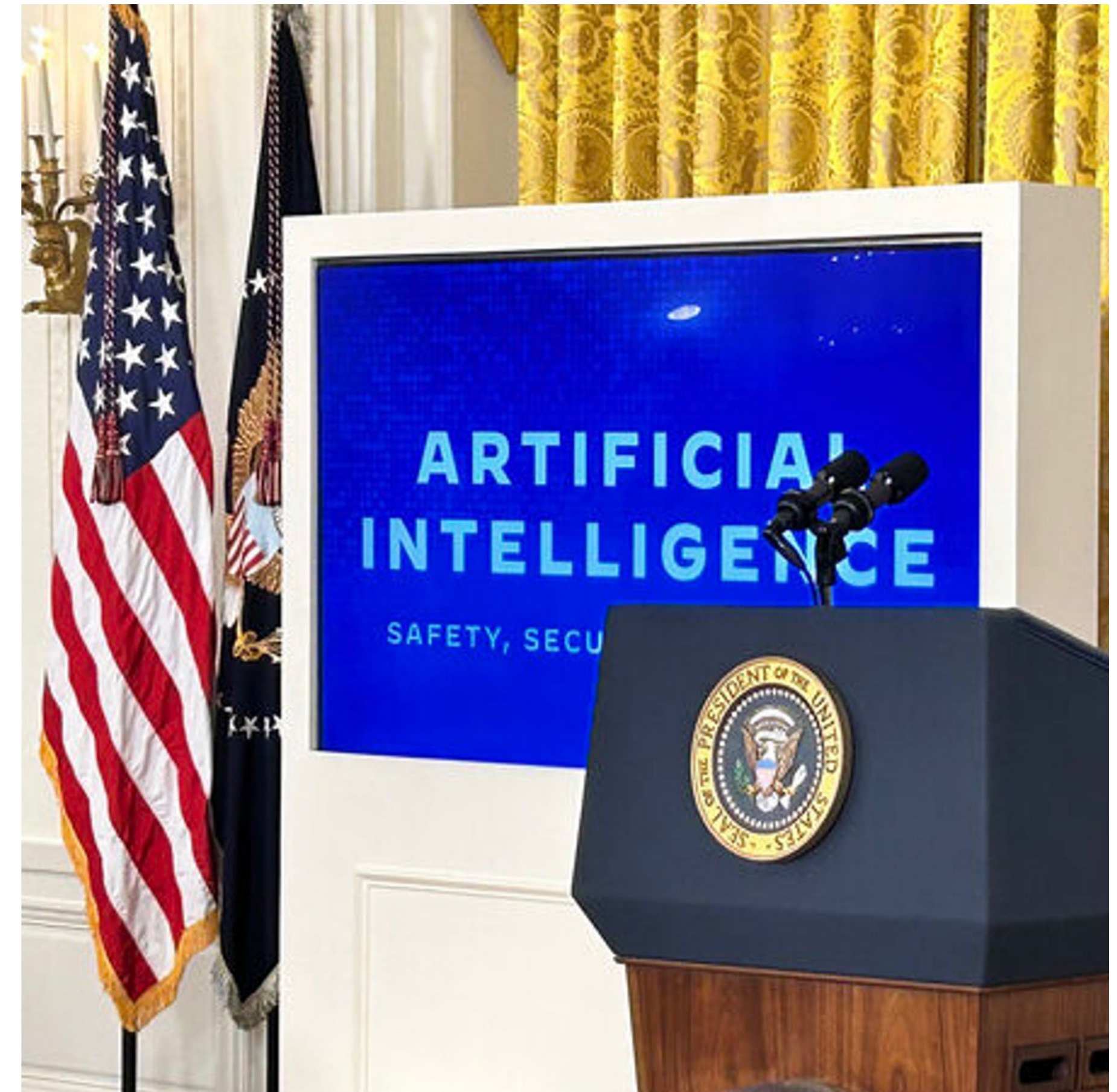
Define standards and best practices for detecting AI-generated content and authenticating official content.

03

Require transparency from developers of powerful AI systems.

04

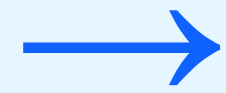
Define safety standards for federal adoption of AI.



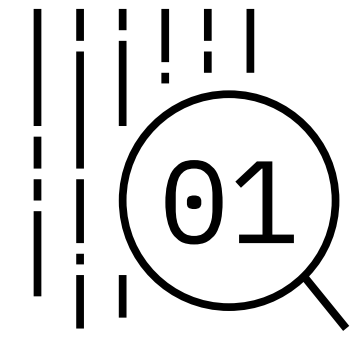
“One thing is clear: To realize the promise of AI and avoid the risk, we need to govern this technology.”

- President Biden

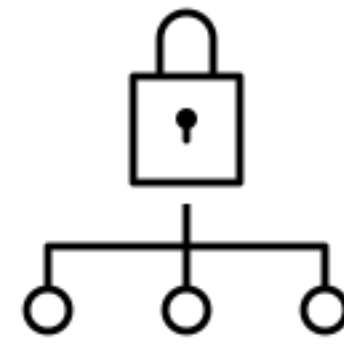
To balance ethics and innovation and harness generative AI you must change how you approach



People

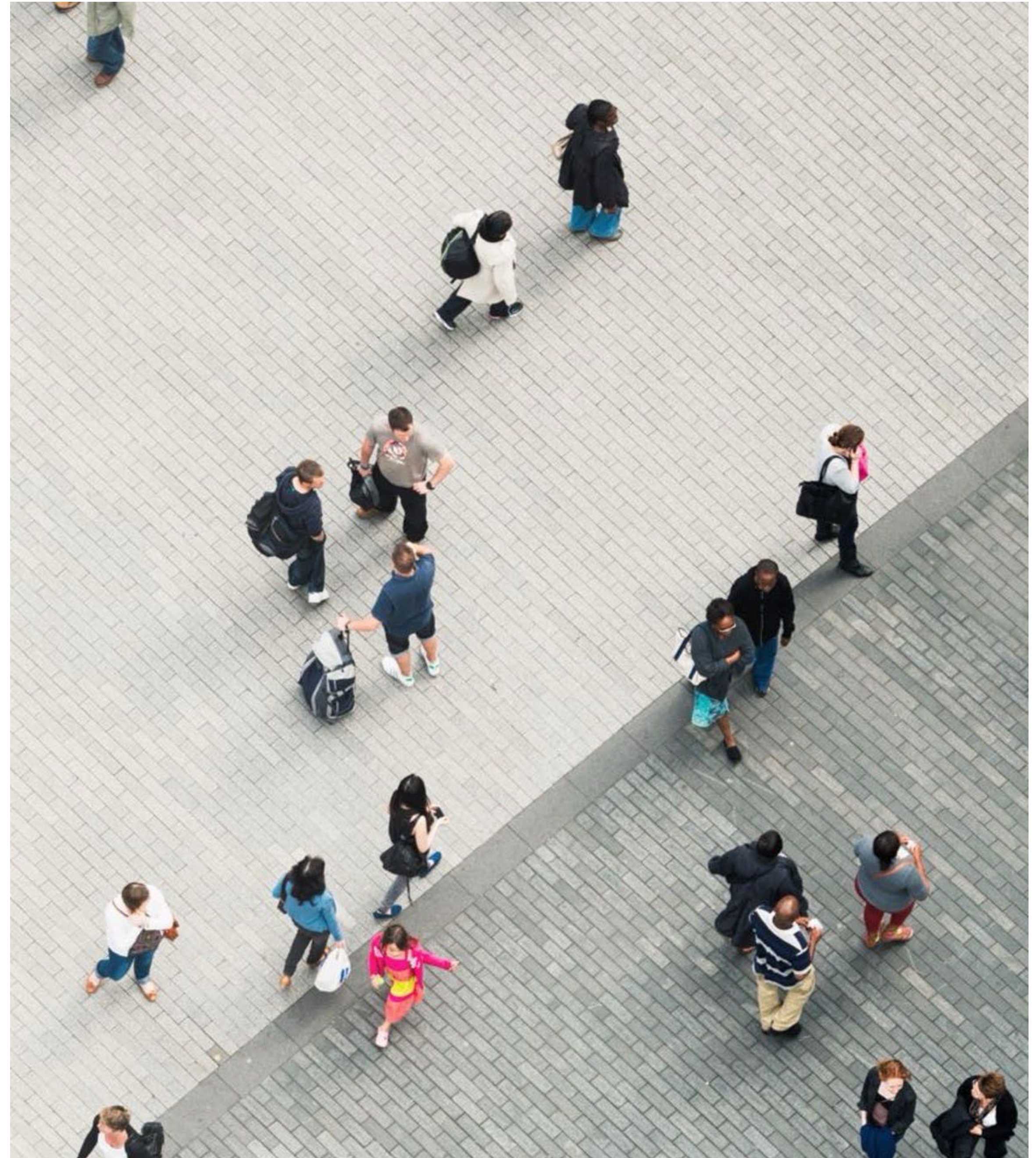
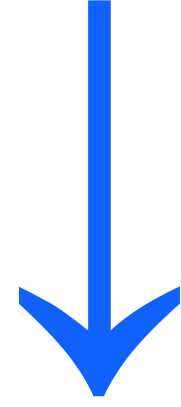


Data



Governance

People



Make *people* central to your AI strategy ↻



Skills first

Upskill your existing workforce—across all levels—to stay competitive.



Curiosity culture

Accelerate creativity to find productive and innovative ways to leverage generative AI within your organization.

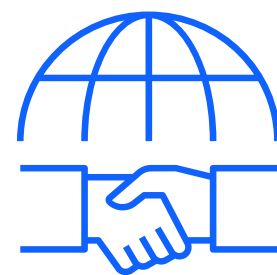


Designated lead

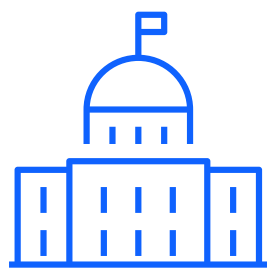
Hire or assign a leader to be responsible for your trustworthy AI strategy.

IBM's AI Ethics Board

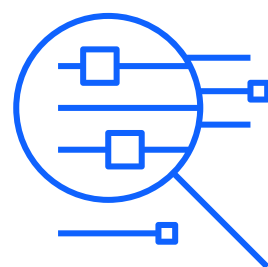
Support a centralized governance, review, and decision-making process for matters related to tech ethics at IBM, both internally and externally.



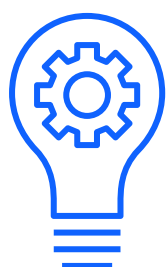
Business
Bright products and services in alignment with ethics principles and practices.



Policy
Inform governments and policymakers to create regulations.

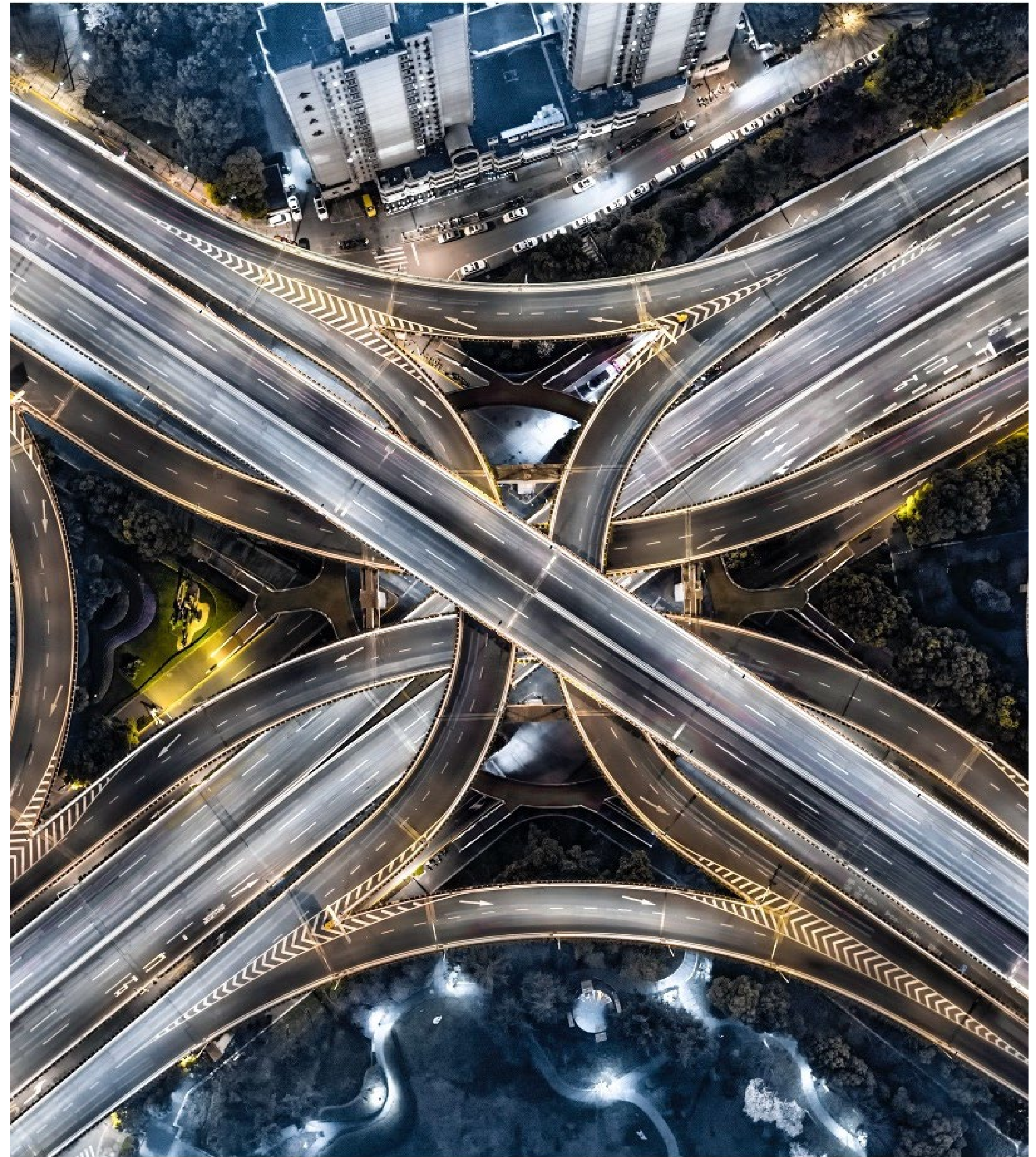
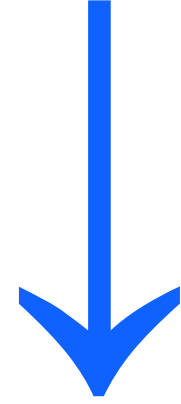


Research
Advance research that illuminates possible consequences and opportunities.



Insights
Publish POV on emerging technologies, their opportunities and risks.

Data



Companies still face fundamental data challenges ↻

Leading to more cost and complexities with governing data used for AI



There's more data

Stored data to **grow over 250%** in 5 years.¹



In more locations

82% of enterprises are inhibited by data silos.²



In more formats

80% of time is spent on cleaning data.²



With less quality

82% of enterprises say data quality is a barrier.³

Sources:

1. IDC
2. Corinium
3. Dun & Bradstreet

A data lakehouse approach gives you a trusted platform so you can →

1

Scale AI while ensuring compliance with lineage and reproducibility of data

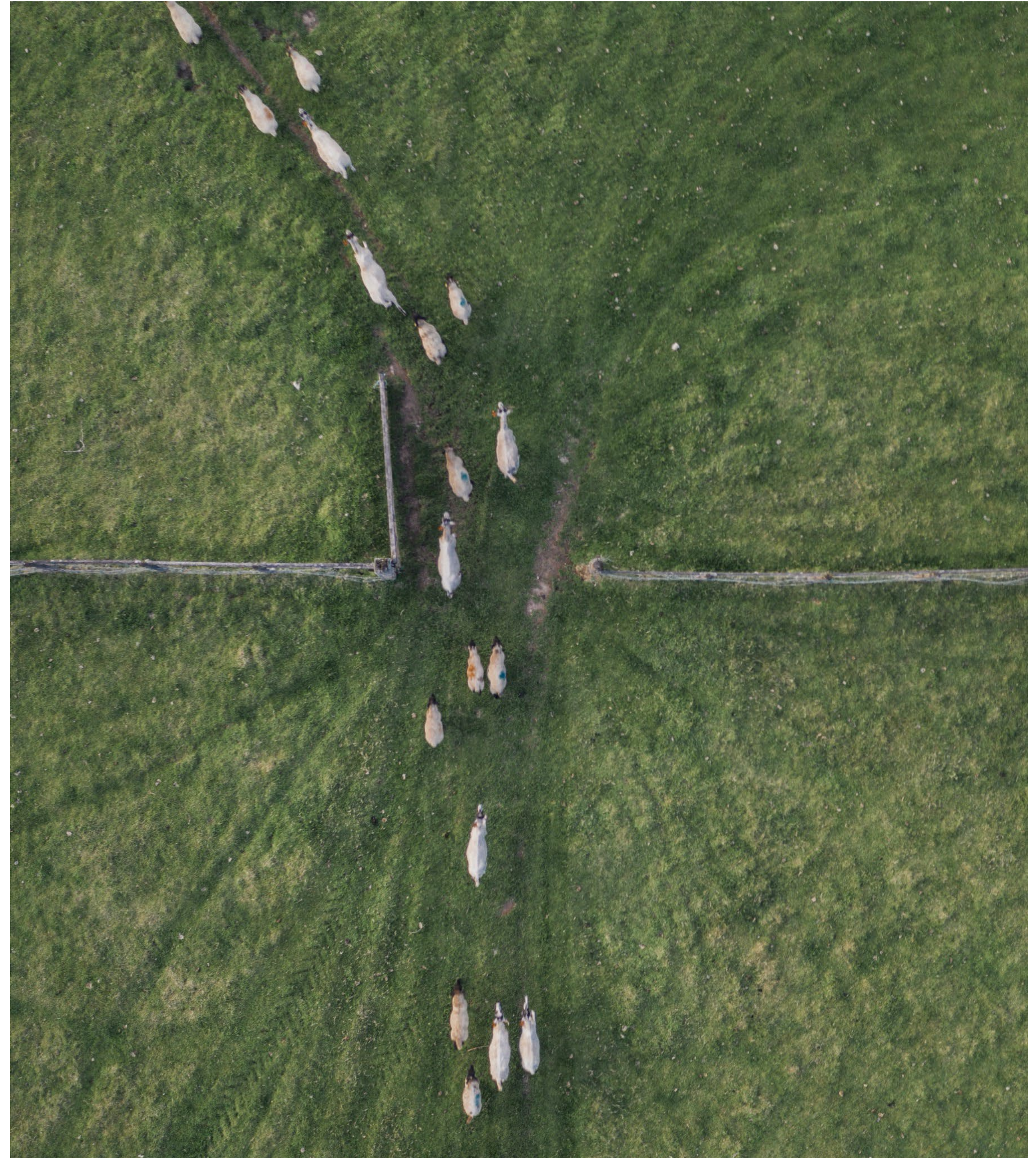
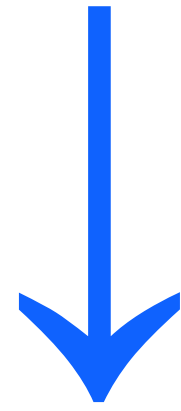
2

Connect to existing data in minutes without expensive duplicating or moving data

3

Grant access for more users and more data while enabling governance and security

Governance



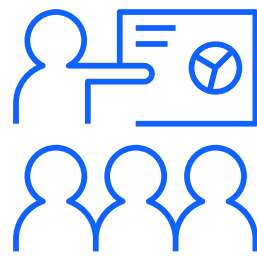
AI and data governance are critical so you can answer:

- How was it trained?
- Can it detect bias and hallucinations?
- Is it transparent?
- Does it support regulatory compliance?
- Is it safe?
- Can it be customized?



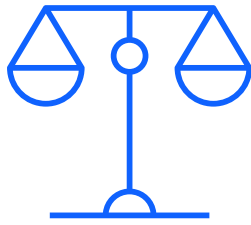
Our foundational properties for trustworthy and ethical AI

IBM's Pillars of Trust →



Explainability

Transparency into an AI algorithm's recommendations.



Fairness

Equitable treatment of individuals, or groups of individuals, by an AI system.



Robustness

Actively defend from adversarial attacks, minimizing security risks.



Transparency

See how the system works, comprehend strengths and limitations.



Privacy

Prioritize and safeguard consumers' privacy and data rights.

IBM POV: Four core principles to tailor generative AI for enterprise ↻

Open

- Based on the best AI and cloud technologies available.
- Giving access to the innovation of the open community and multiple models.

Targeted

- Designed for targeted business use cases, that unlock new value.
- Including curated models that can be tuned to proprietary data and company guidelines.

Trusted

- Offering security and data protection.
- Built with governance, transparency, and ethics that support increasing regulatory compliance demands.

Empowering

- A platform to bring your own data and AI models that you tune, train, deploy, and govern.
- Run anywhere, designed for scale and widespread adoption to truly create enterprise value.

