

IBM AI Governance

driving responsible, transparent and explainable AI

Name:

Position:

Date:



Growth in AI needs governance to be successful



The process of creating *policies*, assigning *decision rights* and ensuring *organizational accountability* for risks and investment decisions for the application and use of artificial intelligence techniques. Gartner – Hype Cycle for Data and Analytics Governance, 2022

Why This Is Important

- Scaling AI without governance is ineffective and can be dangerous.
- AI leaders must *balance* the business value promised by AI against the need for appropriate oversight, risk management and investment decisions.
- AI is drawing the attention of *legislators* worldwide

Business Impact

AI governance, as part of organizational governance structure, **enacts responsible AI**. Provides the *common implementation and adherence mechanisms* across the business ecosystem when it comes to:

- Ethics, fairness and safety to protect the business and its reputation
- Trust and transparency to support AI adoption via *explainability*, *bias* mitigation, and model *governance*.
- Diversity to ensure the right technology and roles for each AI project

Why AI governance – risk and reputation

Poor governance **can damage consumer trust** and is a driving factor behind AI governance

“Fewer than 20% of executives strongly agree that their organizations’ practices and actions on AI ethics match (or exceed) their stated principles and values.”

IBM and Oxford Economics – AI ethics in action, 2021

Can AI models respond to black swan events like COVID-19?



YouTube sued for using AI to racially profile content creators

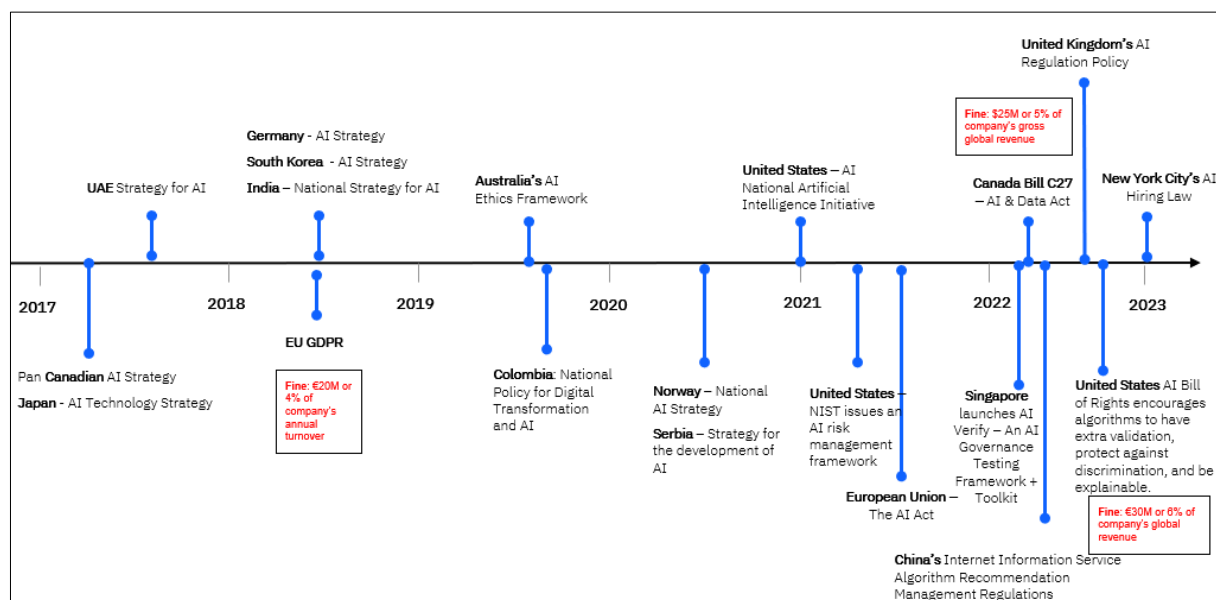
They claim YouTube's algorithms discriminate against black users

BlackRock shelves unexplainable AI liquidity models

Risk USA: Neural nets beat other models in tests, but results could not be explained

Regulatory compliance

Constantly growing & changing regulations driving the need for governance



Sarbanes-Oxley Act



NIST
National Institute of
Standards and Technology

Stakeholders - increasing beyond traditional players

Key decision makers

AI Governance is no longer a “nice to have”, it is a business imperative for every c-suite charter

CEO – Organizational accountability

CIO - Informational technology

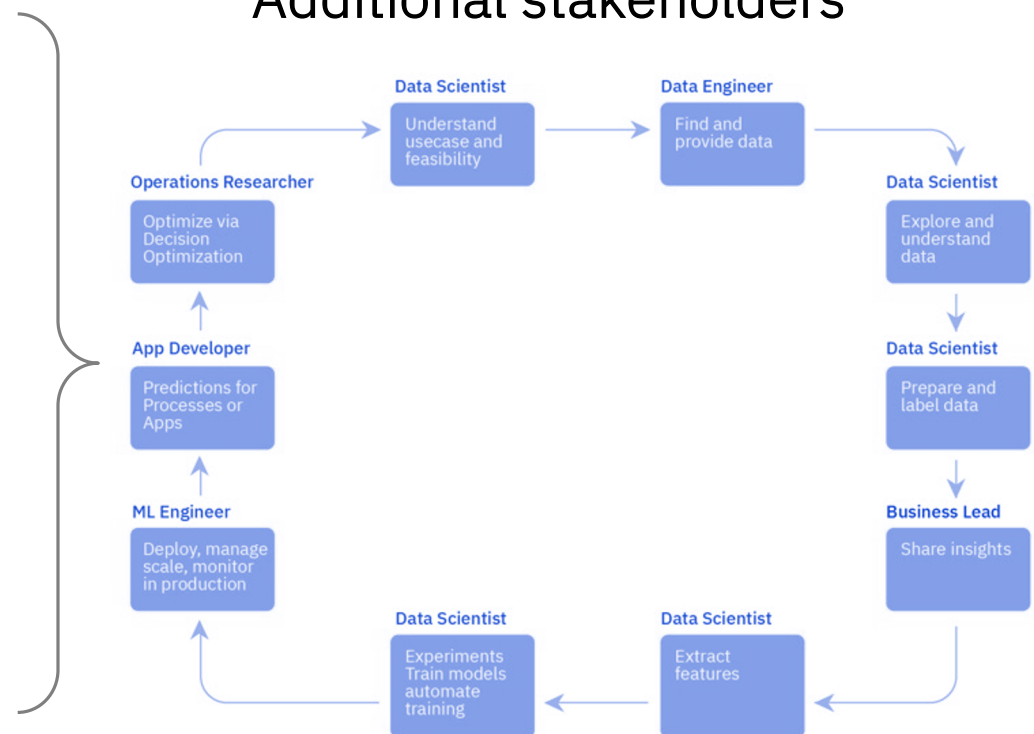
CFO – Risks to profitability

CMO – Risks to brand

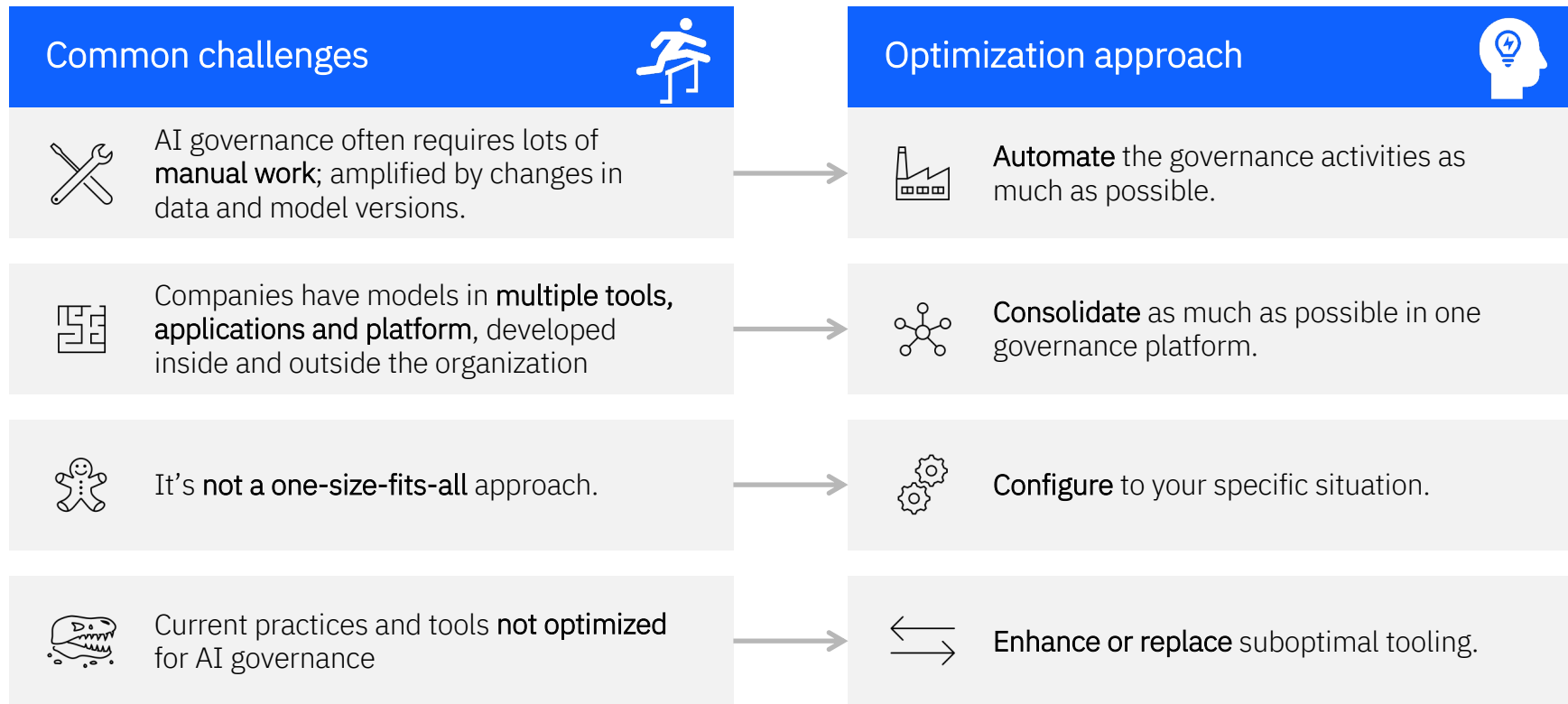
CRO – Risks to enterprise

CDO – Efficient data operations

Additional stakeholders



AI governance is easier said than done



IBM AI Governance – comprehensive solution

Lifecycle Governance

- Monitor, catalog, and govern AI pipelines and models from anywhere
- Automate the capture of model metadata
- Scale model deployment and monitoring
- Increase accuracy of predictions

Risk Management

- Automate facts & workflows to help comply to business and ethical standards.
- Identify, manage, & report on risk/compliance at scale.
- Use dynamic dashboards for clear, customizable results
- Enhance collaboration across regions and geographies.

Regulatory Compliance

- Help adhere to external AI regulations for audit & compliance
- Automate the translation of AI regulations into policies
- Use dynamic dashboards to improve visibility
- Automatic capture



Comprehensive
Govern the **end-to-end AI lifecycle** w
metadata capture at each stage



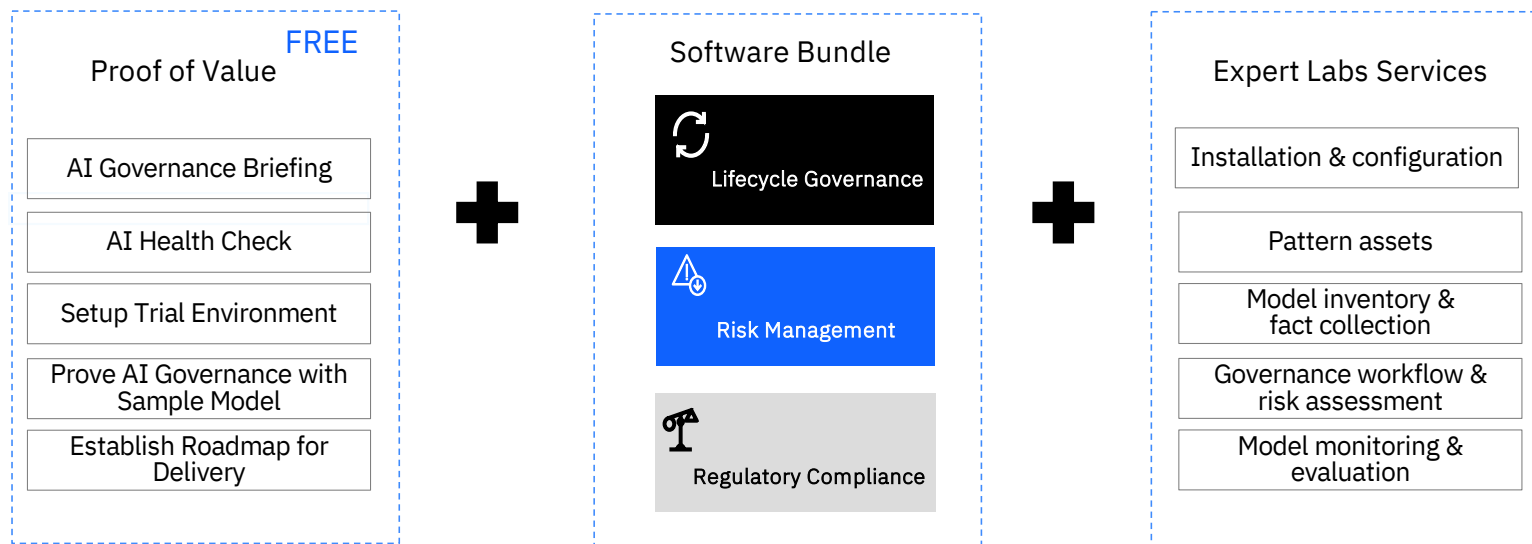
Open
Support governance of models bui
and **deployed in 3rd party tools.**



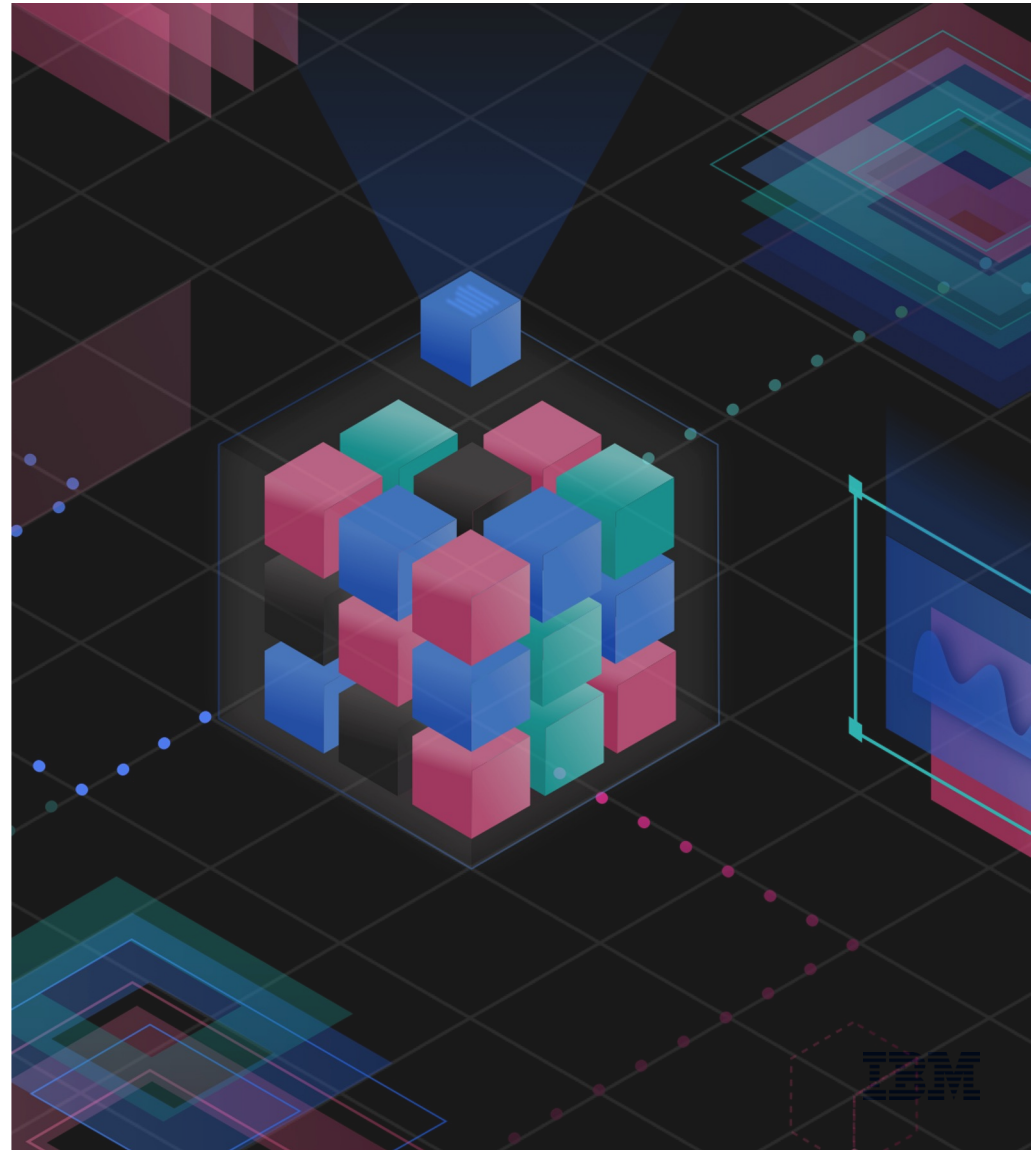
Automatic metadata and data
transformation/lineage capture though
Python notebooks.

Getting Started

End-to-End Solution for AI Governance



Lab 9
AI Governance
Workshop – CPD 4.5.0



CPD 4.5.0 – AI Governance Workshop

Goal:

- Provide a hands-on Cloud Pak for Data 4.5.0 environment that delivers AI Governance and showcases how CPD provides build, deploy and monitor capabilities of an AI Model in a HR use case.

Key Message:

- CPD is a platform which enables all layers of an Enterprise to exhibit digital transformation through fulfilling transparent, explainable and trusted AI

Capabilities showcased in Lab 9:

AI Governance – Attrition Prediction with Watson Machine Learning, Watson Studio, OpenScale, and OpenPages

Capabilities/Technologies Showcased

Key Message: AI governance is an overarching framework that explains how an organization uses AI with a large set of processes, methodologies and tools. Cloud Pak for Data provides this framework for trusted business-ready data procurement, standardized Data Science build tools, AI model lifecycle management, production model monitors, and all-encompassing enterprise governance for risk and compliance.

Story:

You are a Data Scientist tasked with identifying employee attrition through a HR dataset. You will need to develop a full stream approach to this activity which includes AI model building, model deployment, model monitoring and Governance.

What You Will Learn

Learn how IBM's AI Governance solution enabled through Cloud Pak for Data and OpenPages can empower organizations to implement an ethical and responsible AI while maximizing utilization.

As AI utilization continues to proliferate business decision making today, we see AI being used in more advanced and critical business outcomes. The story of AI Governance answers how enterprises navigate the complexity of reputation, regulation and risk in this emerging domain using IBM technology. The AI Governance capabilities of Cloud Pak for Data is a true end to end solution set. You will apply features within Watson Studio, Watson Machine Learning, OpenScale, Factsheets and OpenPages to demonstrate a development, deployment, monitoring and governing of an AI Model as it matures through the AI lifecycle.