

Comparative Insights and Strategies: The Regulation of AI in the Bahamian Energy Sector – A Critical Analysis of EU and US Approaches

An analysis of the EU and US approaches to Artificial Intelligence regulation and their application to regulation in the Bahamian Energy Sector.

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Introduction

◦ Defining Artificial Intelligence

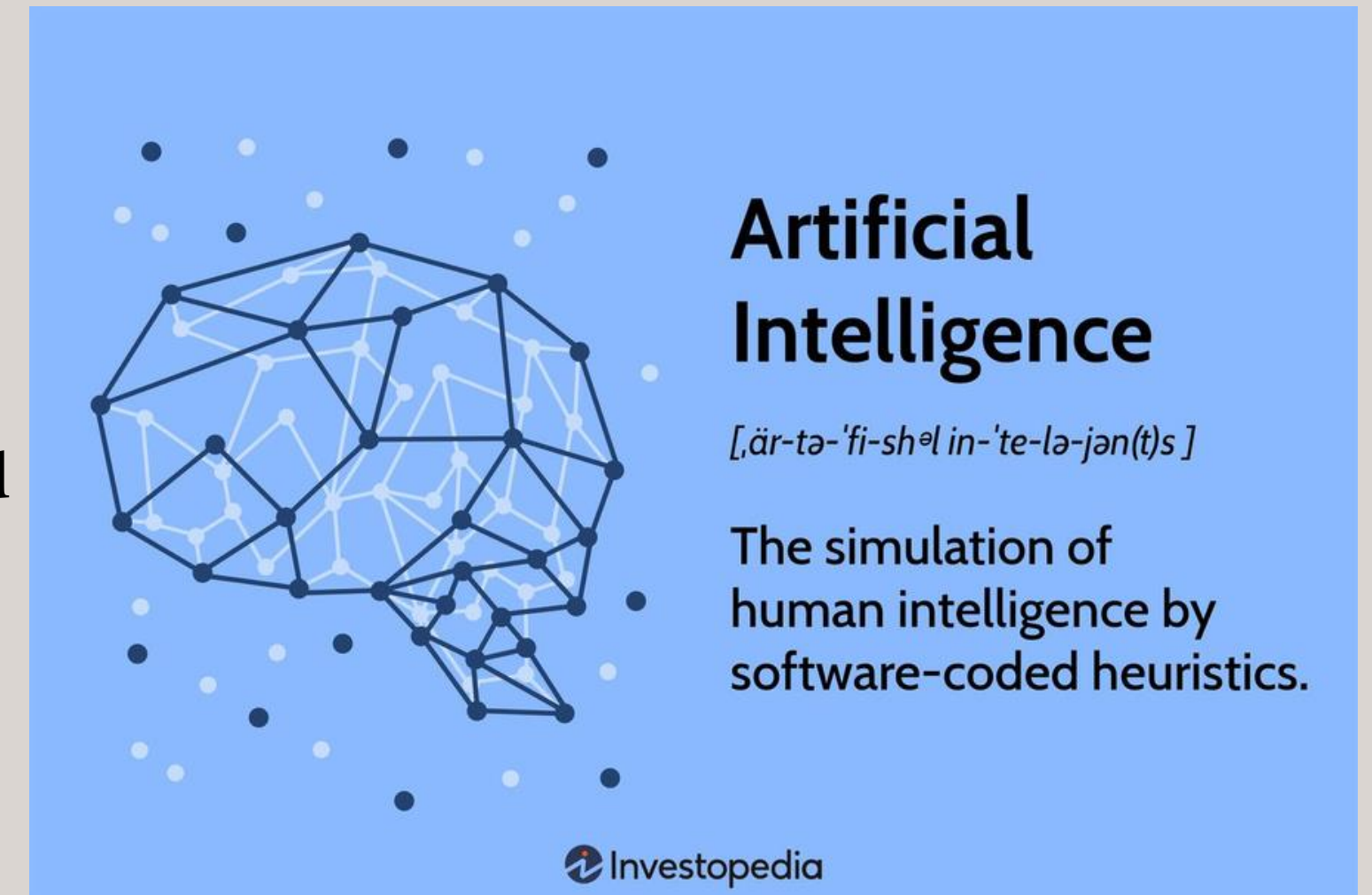
No universal definition of Artificial Intelligence (AI) refers to the development of computer systems that can perform tasks typically requiring human intelligence

◦ EU AI Act - “AI Systems”

‘AI system’ means a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments;

◦ US Bill of Rights - “Automated Systems”

(1) automated systems that (2) have the potential to meaningfully impact the American public’s rights, opportunities, or access to critical resources or services



Introduction

◦ Applications of AI in the Energy Sector

technology interconnection, smart grids power supply management , power system optimization, power user behaviour analysis, fault diagnosis etc.

◦ Potential harms of AI

lack of transparency in decision making, overreliance on AI systems, cybersecurity risks, concentration of power, price manipulation etc.

◦ Approaches to regulating AI

Reliance on existing laws and regulation; Binding legislation v self-regulation

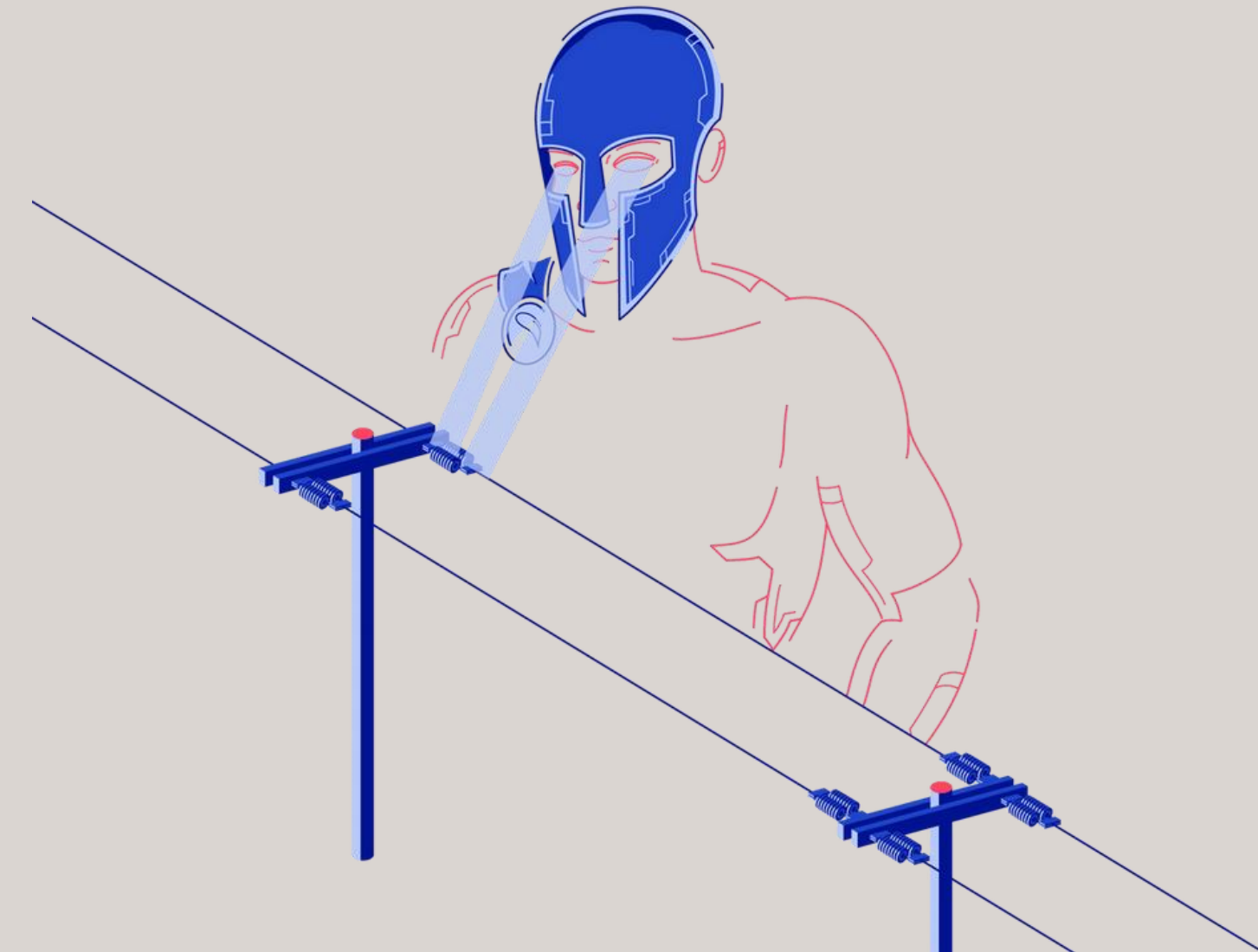


The Product

Case Study:

AI-powered grid inspection - Hepta
Insights

<https://heptainsights.com/case-study/>



AI enhanced analysis - “end to end
grid inspection, using AI enhanced
software to prioritize repairs of
anomalies in the grid”



European Union Artificial Intelligence Act

<https://artificialintelligenceact.eu/>

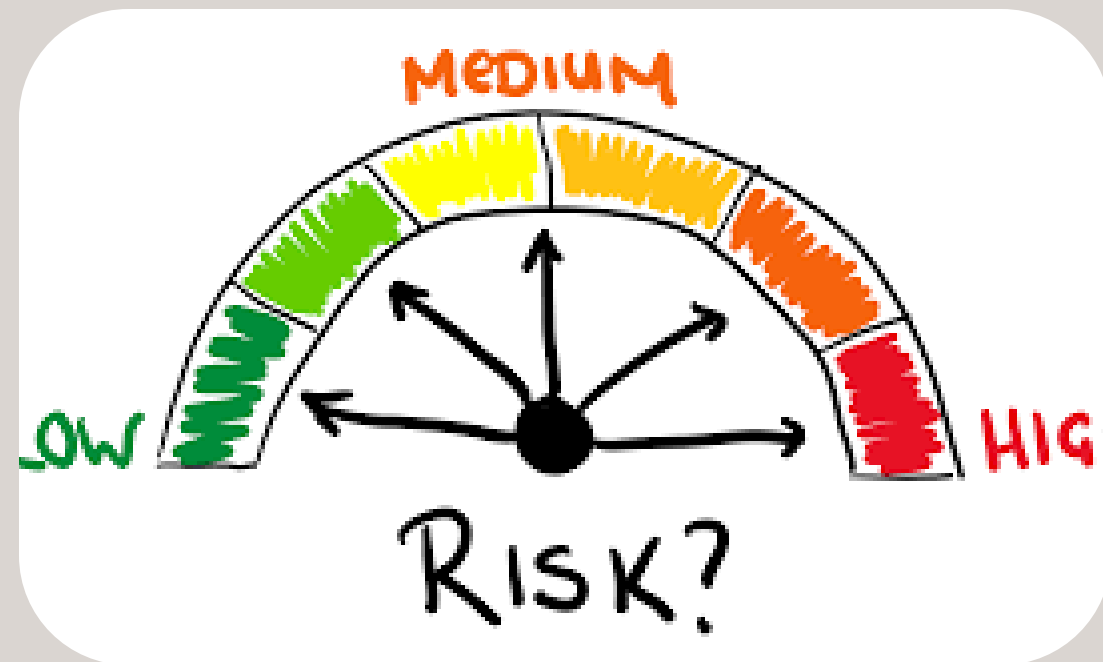
Commission Proposal 2021/206
In force: 1 August 2024

The AI Act - risk based regulation



Primary Goals

AI safety, upholding fundamental rights, facilitating AI investment, enhancing governance and minimizing market fragmentation



Risk based regulation

unacceptable, high risk, limited risk and minimal risk AI uses based on potential to infringe on fundamental rights



High risk AI

safety components, non-banned biometrics, critical infrastructure, education and vocational training, employment, essential private and public services, law enforcement, migration management and administration of justice

Requirements for High Risk AI

- Dynamic risk management system
- Conduct data governance
- Draw up technical documentation
- Design systems for record keeping
- Provide instructions for use
- Allow for implementation of human oversight
- Achieve levels of accuracy, robustness and cybersecurity; and
- Establish a quality management system





US Approach to the 'Regulation' of Artificial Intelligence Act

US Federal Approach

- **United States has enacted different laws as either stand alone legislation or or as components of wider Acts. For example, there is the National Artificial Intelligence Initiative Act, 2020 which establishes the Artificial Intelligence Initiative with provides guidance on AI research.**
- **At the Federal level, the US approach mainly consists of non-binding frameworks and guidelines; ex - The White House's "AI Bill of Rights", the "Risk Management Framework" and the Department of Energy's Risk**
- **Consumer Financial Protection Bureau, Department of Justice's Civil Rights Division, Equal Employment Opportunity Commission and Federal Trade Commission - joint statement that existing legal authorities apply to the use of automated systems sometimes marketed as "AI" just as they apply to other practices**

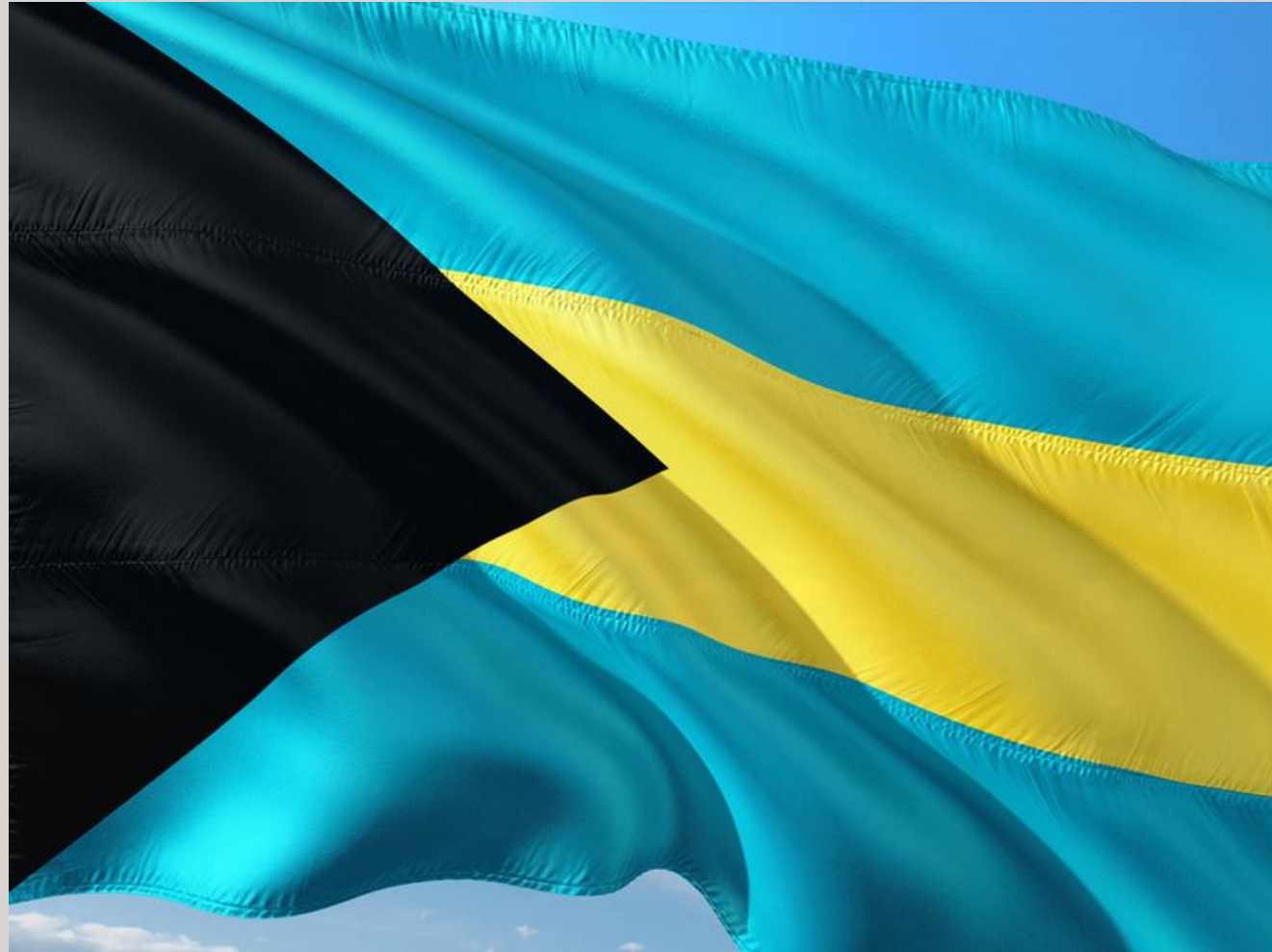
The White House AI Bill and Executive Order

Blueprint for an AI Bill of Rights - October 2022 - Five core principles to guide AI practices: safety and effectiveness, algorithmic discrimination protections, data protection, notice and explanation and human alternatives to AI

Voluntary Commitments - July 2023 - Leading Artificial Intelligence Companies (Amazon, Anthropic, Google, Inflection, Meta, Microsoft, and OpenAI) to manage the risks posed by AI underscore three principles that must be fundamental to the future of AI – safety, security, and trust.

Executive Order - October 2023 - Eight guiding principles: safe and secure, responsible innovation, collaboration and competition, supporting American workers, advancing equity and civil rights, consumer protection, protection of privacy and civil liberties, development of public sector AI professionals and international engagement to develop AI frameworks.

EO represents a transition away from the traditional ‘light touch’ regulation - contains obligations on developers to share test results and critical information with US government, agencies required to develop frameworks and other goals set out in implementation guideline ; does not follow the EU’s Risk based regulation; however, it is suggested that the EO lacks backing in a key area of data protection.



The Bahamas - AI Regulation in the Electricity Sector

Electricity Act, 2024
In force: 1 June 2024

Electricity Act, 2024

Defining AI

“artificial intelligence” or “AI” -

(a) means technology enabling the programming or training of a device or software to -

(i) perceive environments through the use of data;

(ii) interpret data using automated processing designed to approximate cognitive abilities; and

(iii) make recommendations, predictions or decisions,

with a view to achieving a specific objective;

(b) includes generative AI, meaning deep or large language models able to generate text and other content based on the data on which they were trained.

Electricity Act, 2024

section 18, Regulation of AI in the electricity sector

(1) URCA may issue regulations governing the use of artificial intelligence in the electricity sector

(2) Regulations issued under this section shall comply with the following principles, namely that -

(a) the use of AI should provide for -

(i) safety, security and robustness;

(ii) appropriate transparency and explainability;

(iii) fairness;

(iv) accountability and governance;

(v) contestability and redress;

Electricity Act, 2024

section 18, Regulation of AI in the electricity sector

- (b) any person which develops, deploys or uses AI should -
 - (i) demonstrate transparency;
 - (ii) demonstrate testing;
 - (iii) comply with all applicable laws, including in relation to data protection, cyber security, privacy and intellectual property;
- (c) the AI and its applications should be inclusive by design so as -
 - (i) not to perpetuate unlawful discrimination consequent upon the input of data
 - (ii) consider the needs of the elderly, the disabled and any other vulnerable group
- (d) the AI application should generate data that is findable, accesable, interoperable and reusable;
- (e) the burden which is imposed in respect to AI, should be proportionate to the benefits and the nature of the risk to the public

Is the Caribbean ready? Examining existing laws

	Electricity Regulation	Data Protection	Product Liability	Competition Law/Price Manipulation	Cybersecurity	Artificial Intelligence	
The Bahamas	Yes	Yes	Limited	Limited	Limited	Limited	Electricity Act, 2024; Data Protection Act, 2003; s25 Consumer Protection Act, 2006; and Computer Misuse Act, 2003;
Jamaica	Yes	Yes	Limited	Yes	Yes	No	Electricity Act, 2015; Data Protection Act, 2020,; s.22 Consumer Protection Act, 2005; Fair Competition Act, 1993; and Cybercrimes Act, 2015
Barbados	Yes	Yes	Limited	Yes	Limited	No	Utilities Regulation Act, 2002; Data Protection Act, 2019; Consumer Protection Act, 2003; Fair Competition Act, 2003; Computer Misuse Act, 2005 (note-Cybercrime Bill)
Suriname	Yes	No	-	No	-	No	Electricity Act, 2016; Criminal Code, 2015 (incorporating Budapest Convention on Cybercrime; Privacy and Data Protection Bill

Case Study: AI-powered grid inspection - Hepta Insights

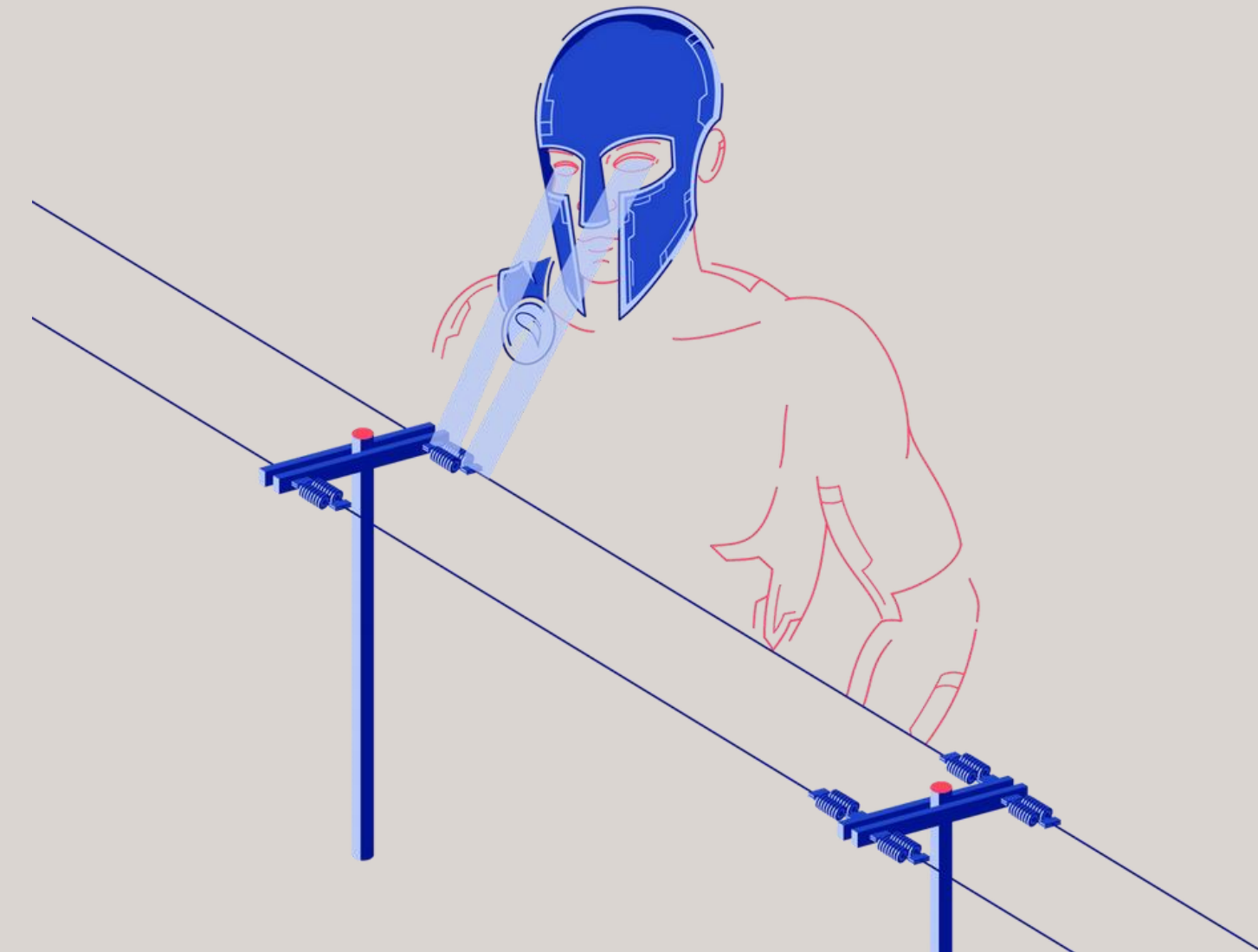
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Conclusion

- The principles and harms being sought to be protected in AI regulation are relatively common across jurisdictions that have launched AI regulatory strategies
- There is a varied approach on what to regulate and how to regulate seen from the EU versus US approach
- In application to the Caribbean, an important factor to consider is the readiness of the jurisdiction as it relates to existing legislation in order to determine a best fit application for each jurisdiction

Thank you!

Questions & Answers

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