

UNLV

INTERNATIONAL GAMING INSTITUTE

A Balancing Act:

Exploring Ethical Considerations of AI in Gambling

National Conference on Gambling Addiction and Responsible Gambling
July 2024

Kasra Ghaharian, Ph.D.
Director of Research

kasra.ghaharian@unlv.edu

Knowledge.

Research.

Innovation.

slido



**Join at slido.com
#3483257**

① Start presenting to display the joining instructions on this slide.

About Me

Current

Director of Research, UNLV International Gaming Institute

Editor, UNLV Gaming Research & Review Journal

Member, IGSA Ethical AI Committee

Background

2009 – 2010: MSc UNLV, Slot Floor Optimization

2010 – 2018: Marketing and Analytics, Las Vegas Sands and Caesars

2019 – 2022: PhD UNLV, Machine learning in Responsible Gambling

2022 – 2024: Post-doc, International Gaming Institute



Agenda



Introduction. A (very) brief history of data and the state of AI today.



Ethics 101. Plus, some potential ethical dilemmas in the gambling industry.



AI Ethical Principles. One (limited) approach to AI management and governance.



AI Ethics in Gambling. From principles (the “what”) to practice (i.e., the “how”).

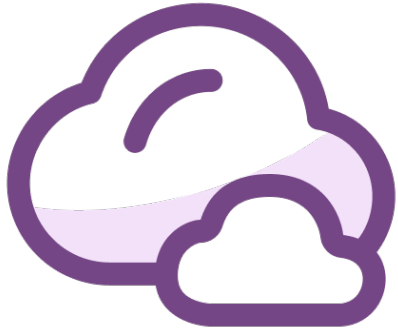


Conclusions. A proposed framework and future directions.

**5 years, give or take,
maybe slightly longer.**

slido

Please download and install the
Slido app on all computers you use

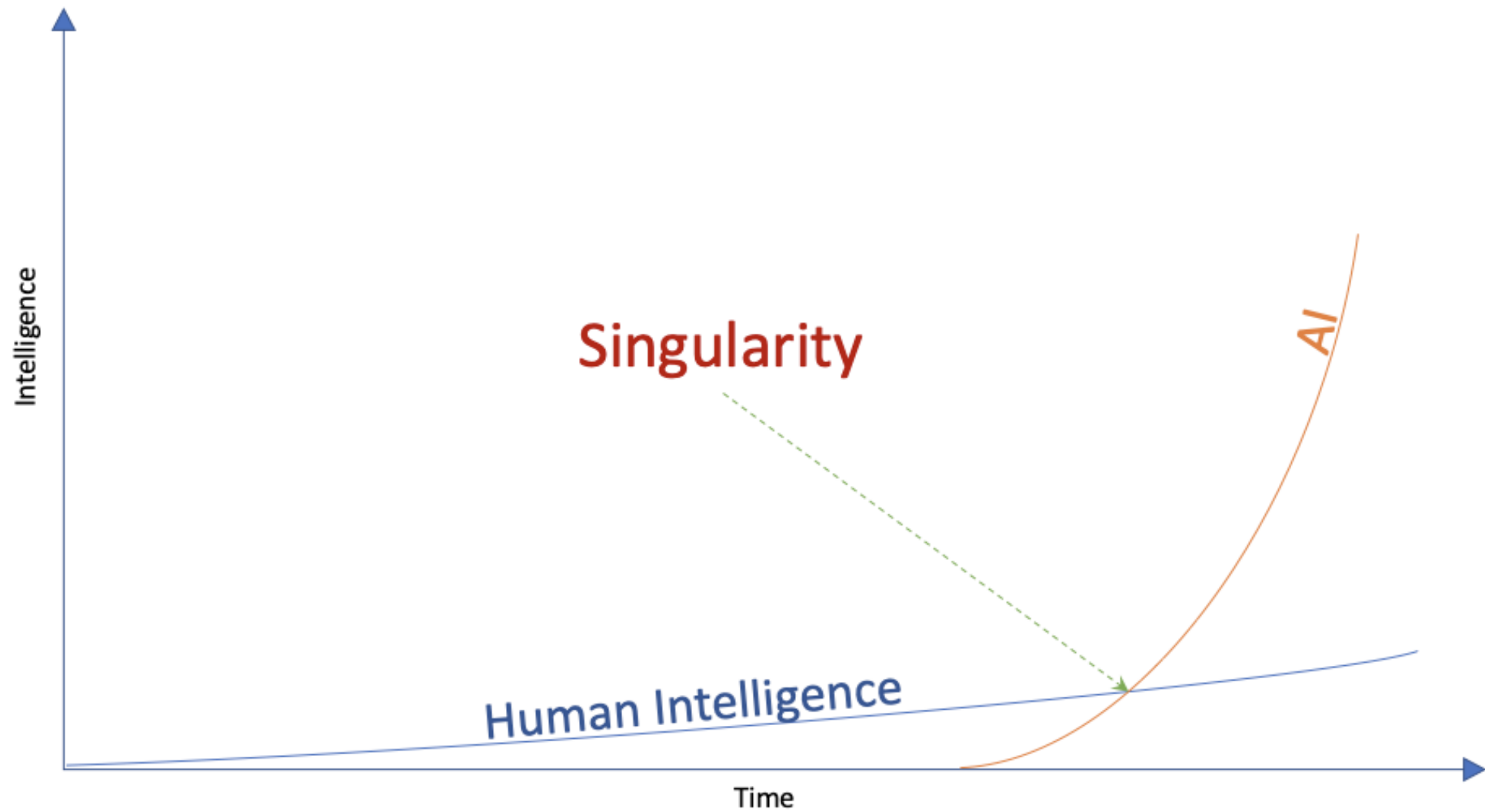


**5 years, give or take, maybe
slightly longer.**

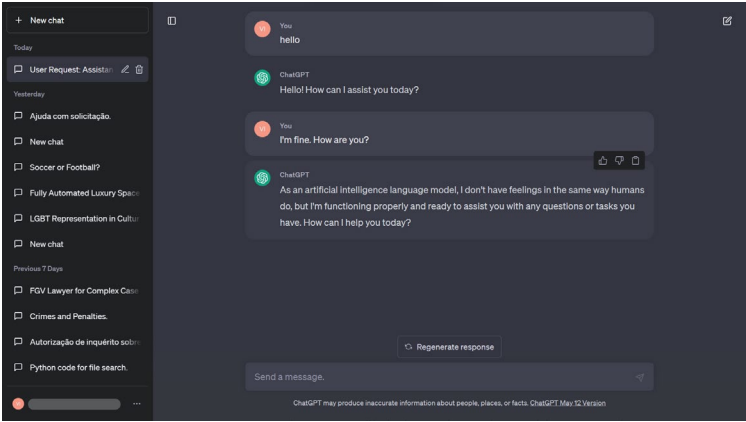
**Who said that and in reference
to what?**

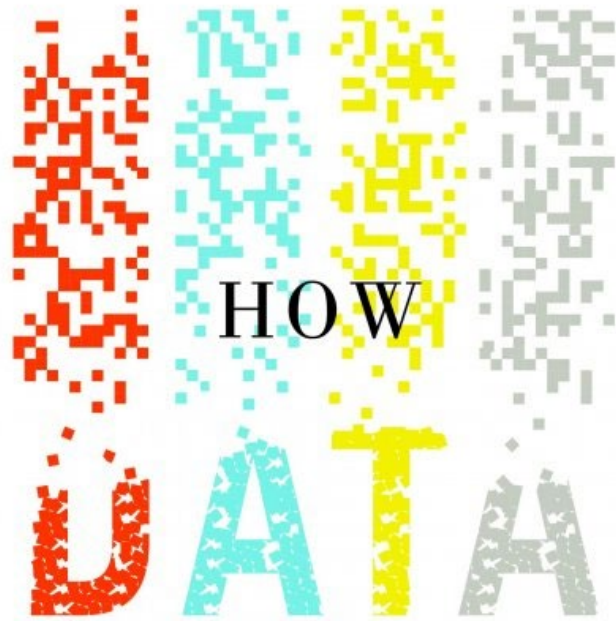
① Start presenting to display the poll results on this slide.





M				M			
McGraw Susan	W	F	29	McGurney John S.	W	M	9
Martinez Cardine	W	F	39	McIntosh Loretta	W	M	30
—— John	W	M	20	—— Cornelia	W	F	41
Moscrip Max	W	M	19	—— Addie	W	F	15
—— Lillian	W	F	24	—— Annie	W	F	13
—— Edna	W	F	10	—— John	W	M	8
Masona Martin	W	M	33	—— Libbie	W	F	5
—— Margaret	W	F	32	—— Millie	W	F	2
—— John	W	M	23	—— Grace	W	F	2
—— Dorcas	W	F	21	McMahon Bridget	W	F	56
—— Cardine	W	F	19	—— James	W	M	22
—— Anna	W	F	17	McNally Maude	W	M	31
—— Fred	W	M	13	—— Catharine	W	F	30
				——	W	F	21





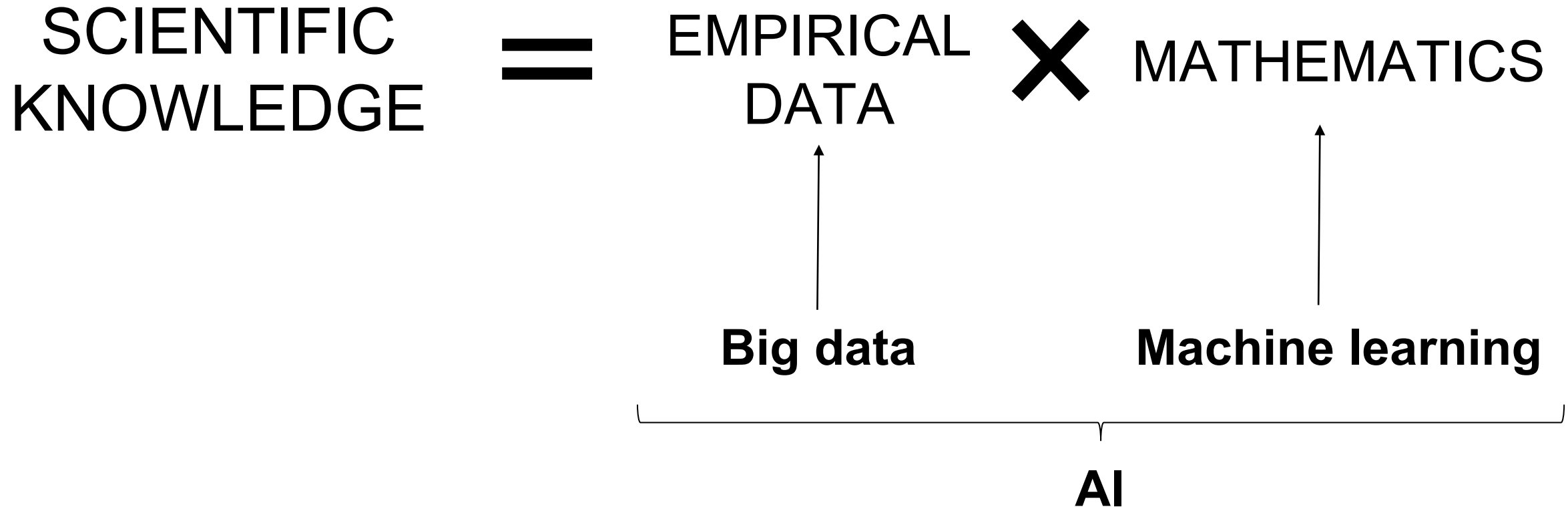
HAPPENED

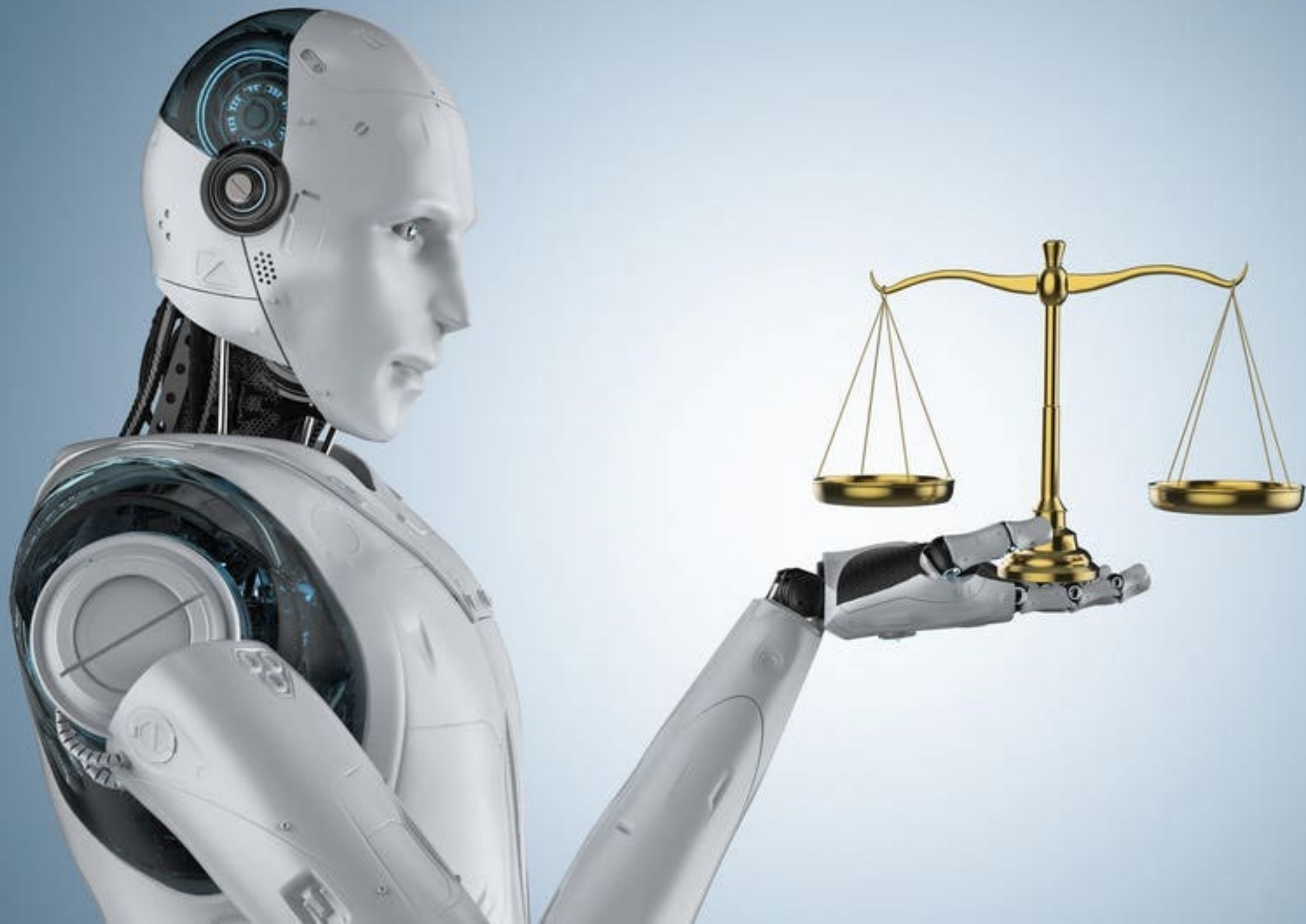
*A History from the Age of Reason
to the Age of Algorithms*

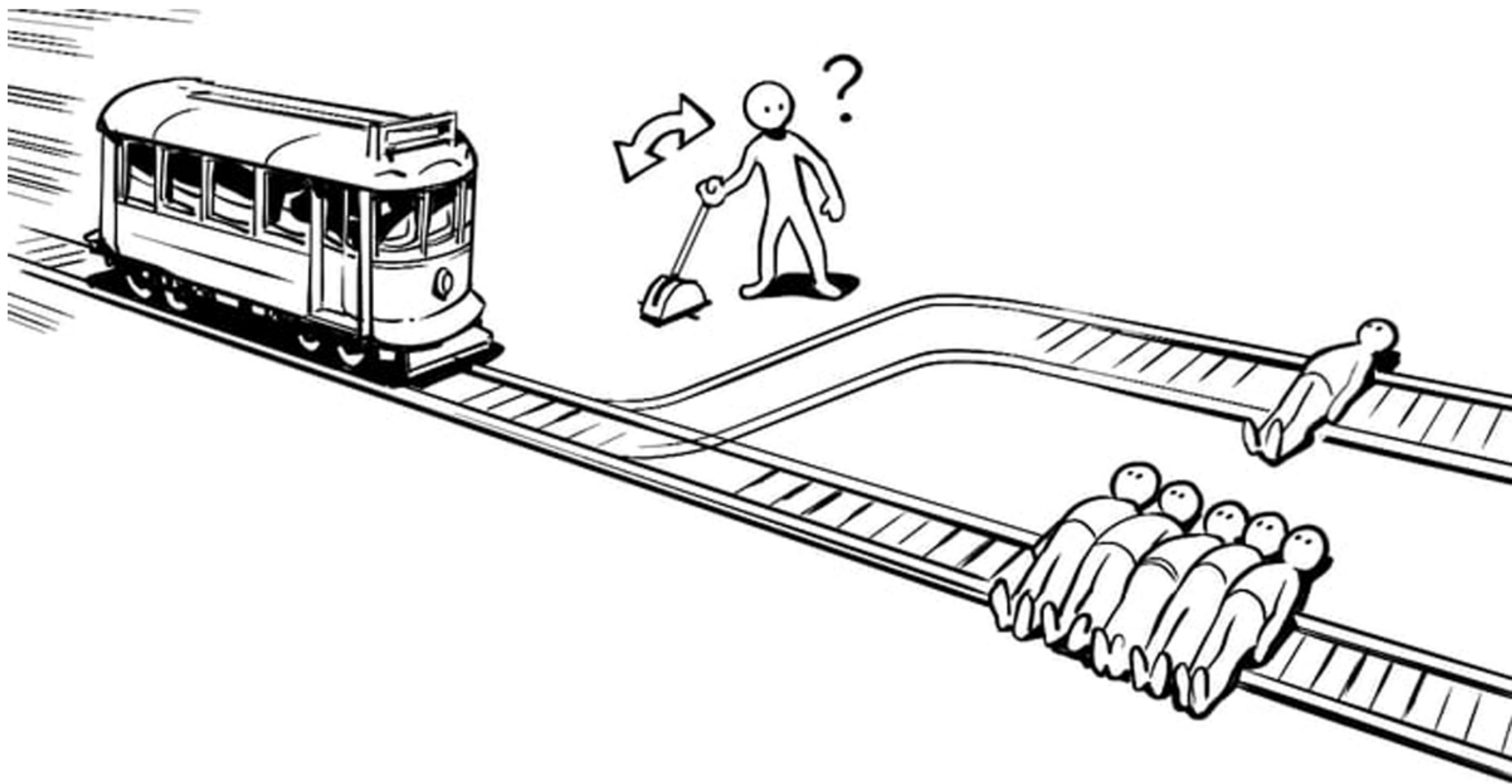
CHRIS WIGGINS
and MATTHEW L. JONES

**Today, Artificial
Intelligence primarily
means machine
learning on huge
datasets.**

More **AI**, More **KNOWLEDGE**







Huntington's Disease

Disabilities

Muscles and height



Ethical Theories

Utilitarianism

- Outcome-based.
- An action is right if it promotes the best consequences.

Deontology

- Duty-based.
- An action is right if it aligns with a moral rule or principle.

Virtue Ethics

- Character-based
- An action is right if it is what a virtuous agent would do in those circumstances.

Ethical Dilemmas of AI in the Gambling Industry





A bank has created AI that can tell with 95% certainty who is likely to develop gambling problems and automatically blocks transactions.

But the AI cannot provide an explanation as to why it makes certain decisions.

Should this AI be used?

① Start presenting to display the poll results on this slide.

EXPLAINABILITY



Utilitarianism

- If the AI produces better outcomes for a majority, use is justified even if not explainable.



Deontology

- Explainability is essential. Keeping customers uninformed is inherently wrong.



Virtue Ethics

- Opaque models used with good intentions may be seen as virtuous.



Please download and install the
Slido app on all computers you use



A casino uses AI for targeted advertising.



To avoid inadvertent exploitation of vulnerable people, they want to incorporate personal data into the AI (gender, address, income, ethnicity).

Should they be able to collect this data without user consent?

① Start presenting to display the poll results on this slide.

CONSUMER RIGHTS



Utilitarianism

- Violating consumer rights can be justified if it leads to greater happiness.



Deontology

- Consumers have an inherent right to privacy, autonomy, and control over their data.



Virtue Ethics

- Respecting consumer rights may reflect virtues like respect, integrity, and honesty.



A company has created AI that can reduce gambling disorder and associated harms by 50%, if implemented globally.

For shareholder benefit, the company keeps all details related to the AI confidential.

Are these proprietary practices ethical?

① Start presenting to display the poll results on this slide.

TRANSPARENCY



Utilitarianism

- Transparency leads to trust, benefiting industry and consumers. Secrecy resulting in greater harm is unethical.



Deontology

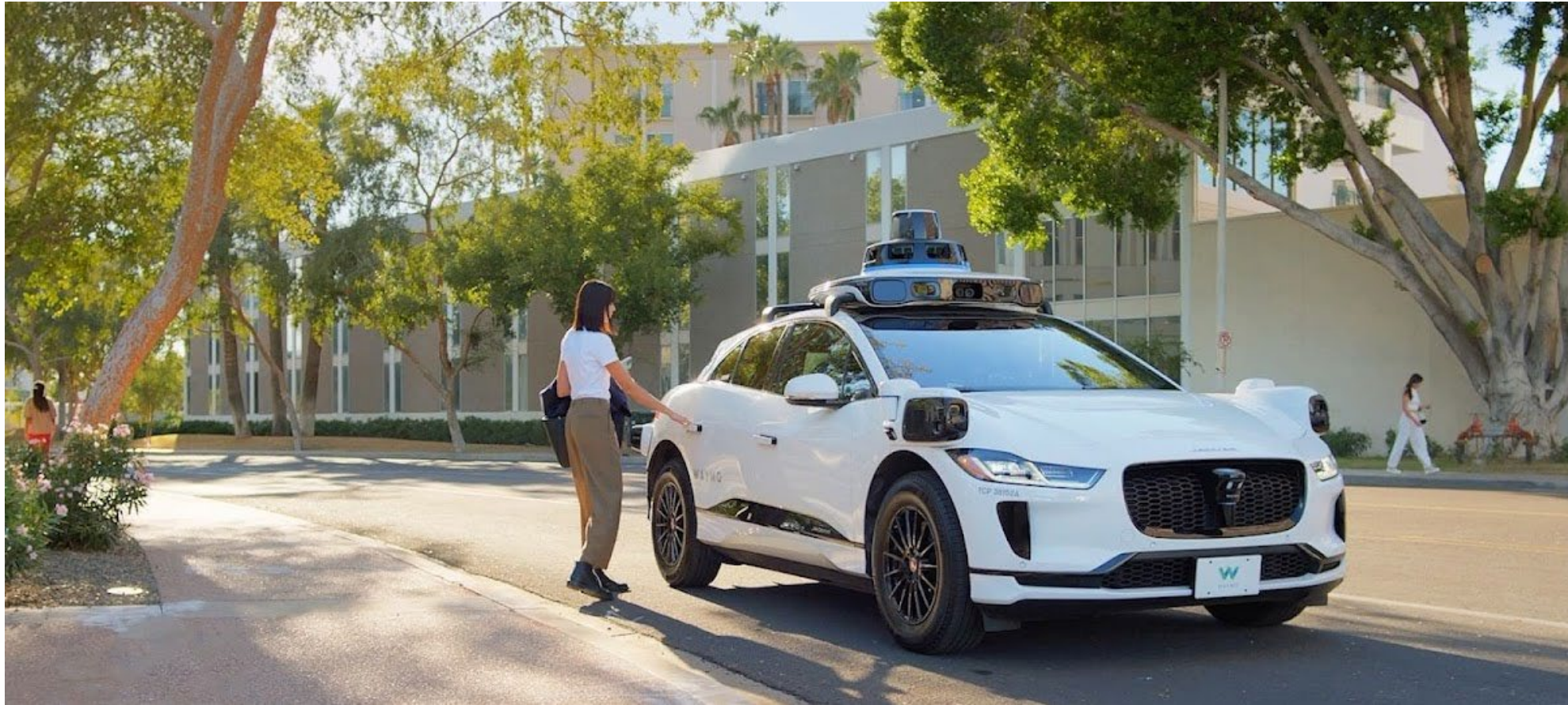
- Companies have a duty to be transparent, regardless of outcomes.



Virtue Ethics

- Transparency could be a virtue itself, reflecting good moral character.

AI Ethics – the response to AI's power and danger

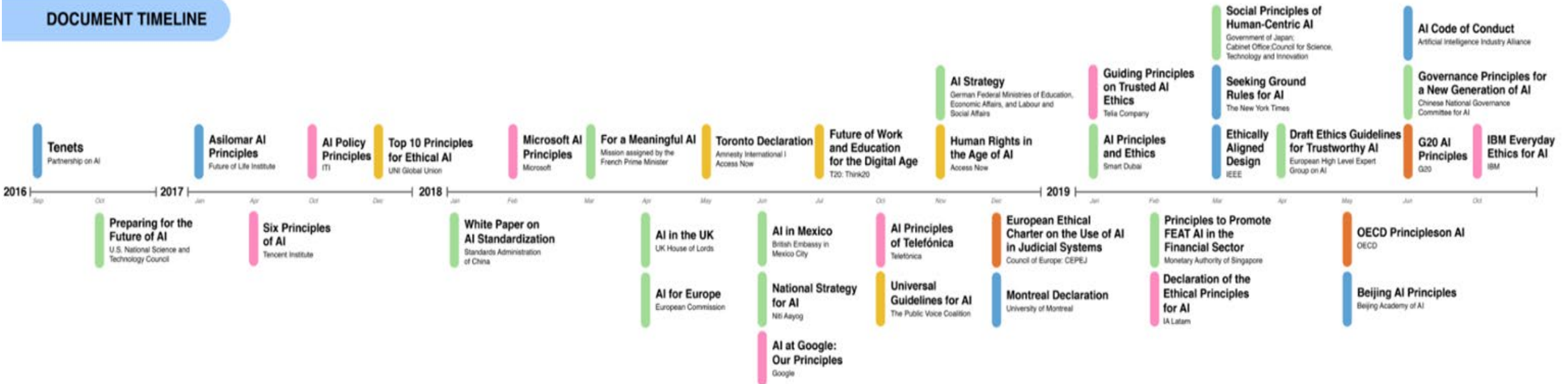


AI Ethics – the response to AI's power and danger



AI Ethical Principles

DOCUMENT TIMELINE





**Empowering
humans**



Human control



**Privacy,
security and
safety
by design**



Accountability



**Fairness and
minimization
of bias**



**Transparency,
explainability
and ethical use**

PRINCIPLES

?

PRACTICE

!



Other Problems with Principles

Lack of consequence. Principles have no “teeth” and are being used in place of regulation.

Not “self-enforcing”. For example, Google’s External Advisory Council would review projects, but had no power to stop them.

Ethics “washing” or “box-ticking”. Corporations enjoy the appearance of ethics without the substance.

Too broad/Lack context. The ethical implications of deploying AI in healthcare are unlikely to be the same as the ethical implications of deploying AI in an educational setting.





The RAIMLinG Project

Responsible AI and ML in Gambling

PROJECT 1

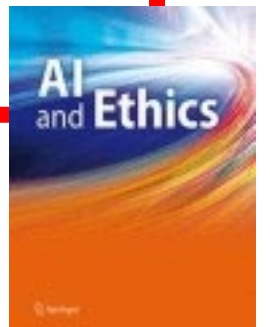
SCOPING REVIEW

Exhaustive analysis of gambling specific documents.
(under review)

PROJECT 2

1-on-1 INTERVIEWS

1-hour in-depth interviews with 33 gambling stakeholders.
(in press)



Methods

Semi-structured interviews

Participants were not compensated

Grounded theory to analyze the data

Pre-registered at the Center for Open Science

Ethical approval by UNLV Institutional Review Board

Key Research Questions

RQ1: What do they perceive as the central ethical issues and risks? **The “what”**

RQ2: What are their perspectives on how these issues and risks can be addressed? **The “how”**

33 in-depth interviews

13 B2B service providers

6 licensed gambling operators

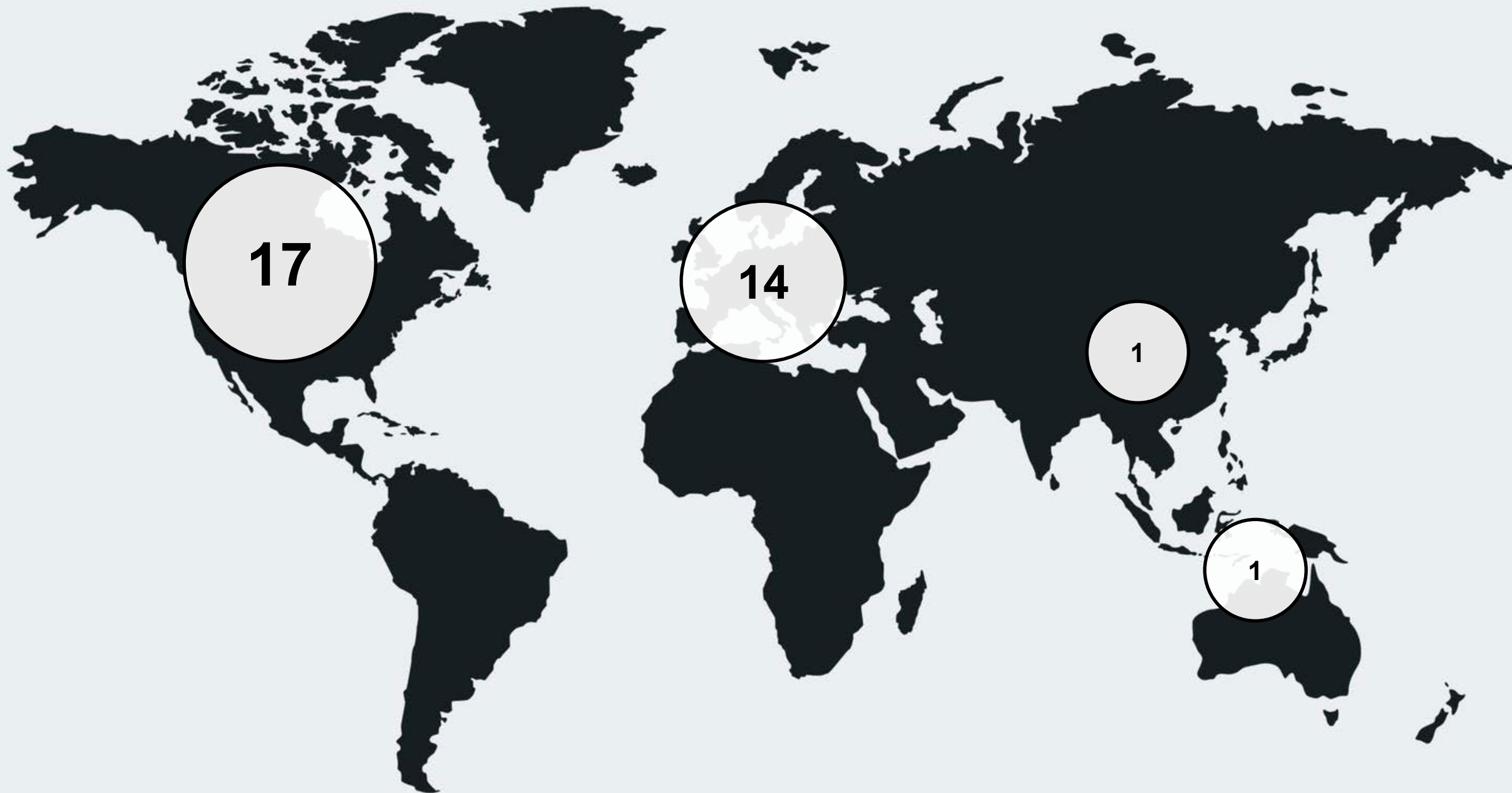
6 gambling industry consultants

4 gambling focused academics

3 gambling regulators

1 non-profit organization employee



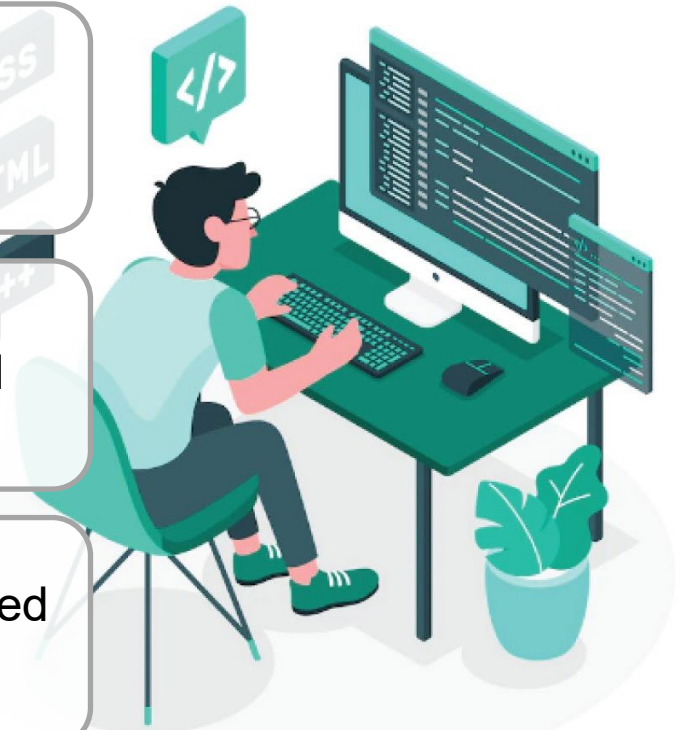


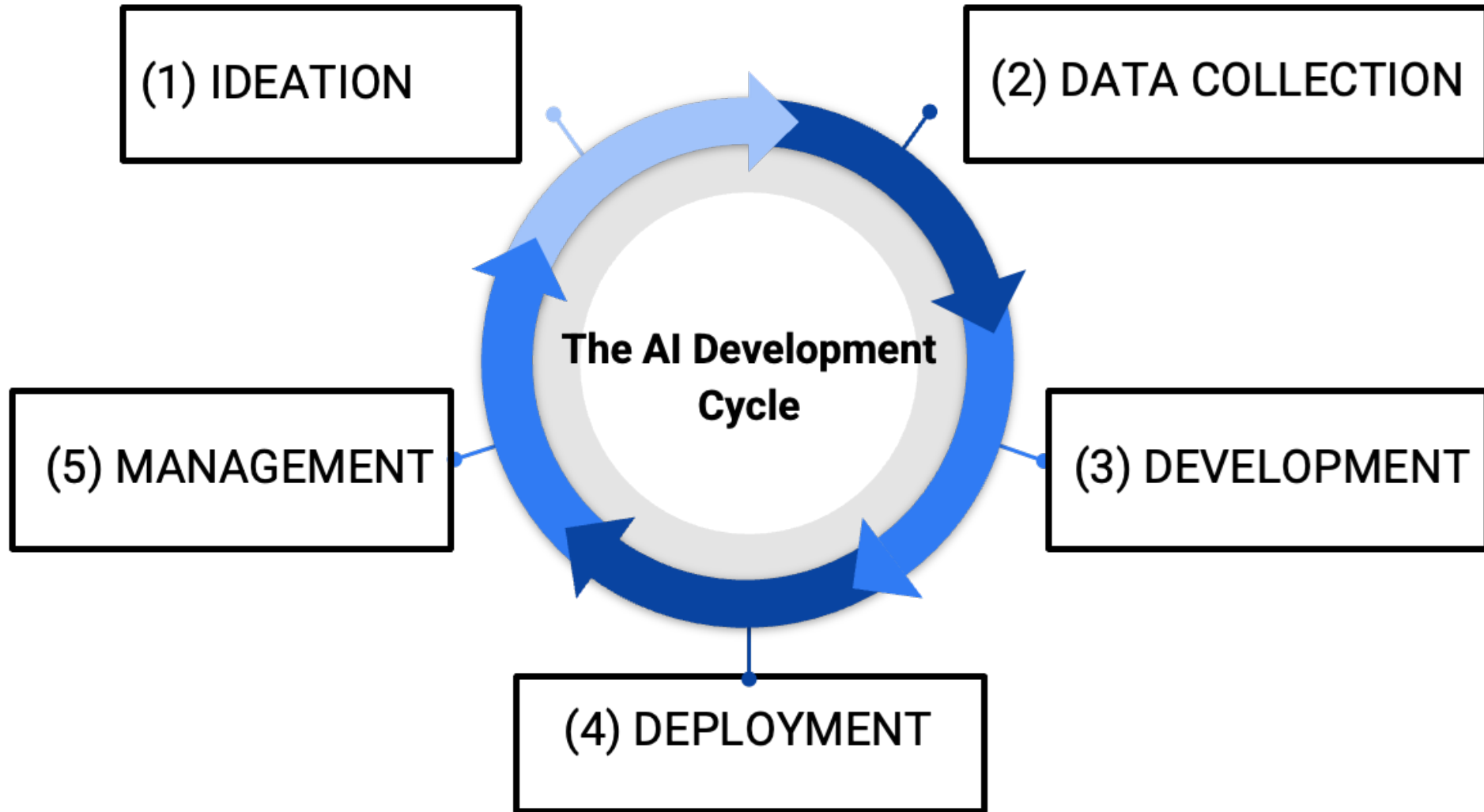
AI experience level

High = At least 1-year direct experience, has applied AI or machine learning methods for research and/or practical applications

Mid = Some or no direct experience applying AI or machine learning methods, has technical background and experience in a related field (e.g., IT, statistics, etc.)

Low = No applied experience, knowledgeable of technology or has used consumer-facing AI products (e.g., ChatGPT)





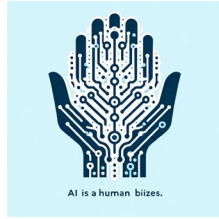
Interviewees uncovered 3 key themes



Player exploitation

“maybe there is a line somewhere, where you are exploiting players to your maximum advantage, and maybe to their detriment”

“Is there any kind of clear separation, a firewall, between that prevention tool and other purposes that exist within the same institution which are the commercial purposes?”



A human creation

“If there's bias present in the data that could indicate biased data, or it could also indicate that there's you know, just something to be concerned about ethically with just how the world operates right?”

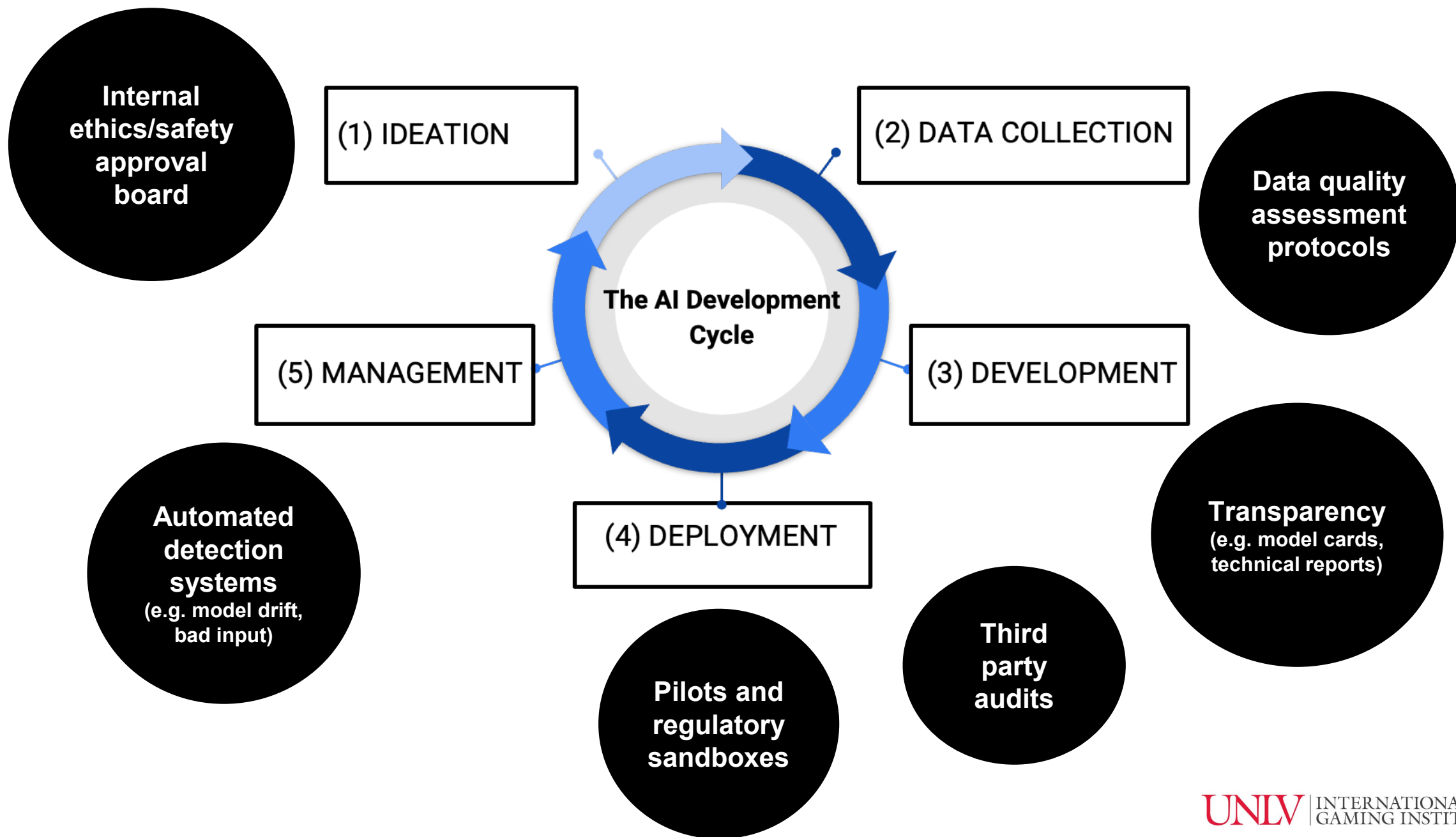
“Are those systems performing equally well to detect problems for all the groups of society?”



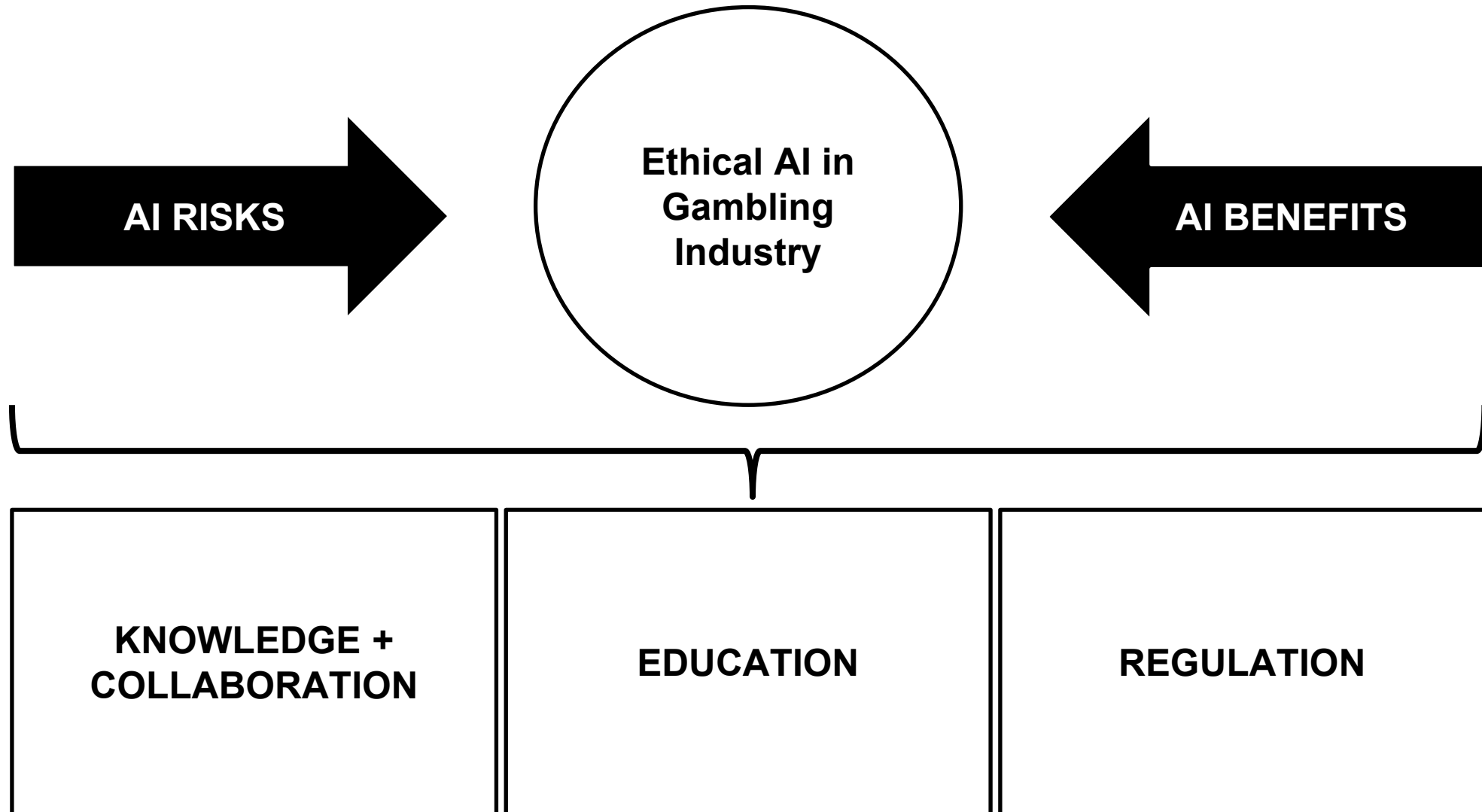
Knowledge and guidance

“The algos haven't been properly vetted ...so you might have a casino and they think that they're leveraging a well put together algorithm.”

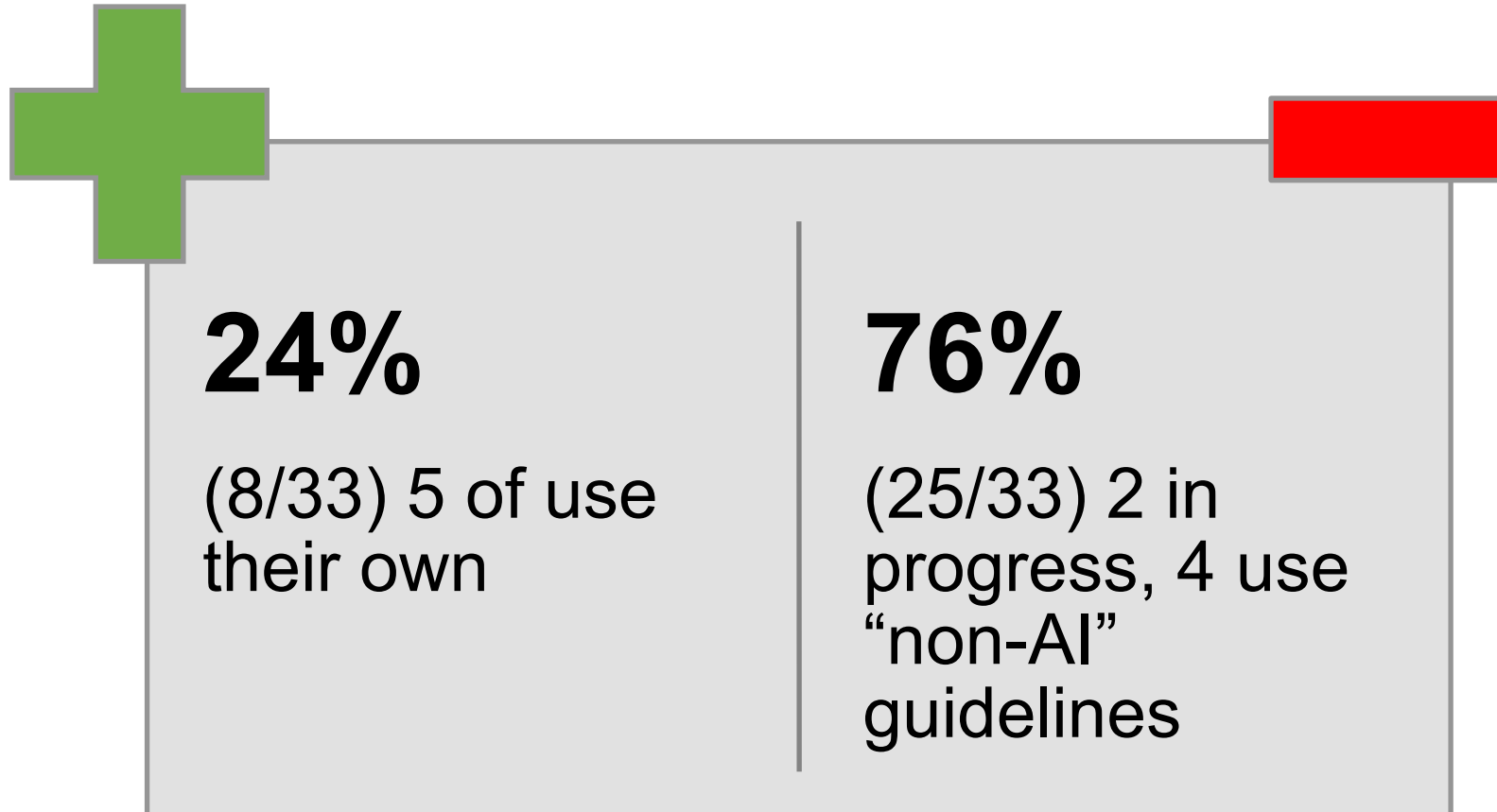
“There needs to be somebody with the technical acumen ...and there needs to be somebody who is well versed enough in the topic of gambling, or addiction, or harm prevention, or public health.”



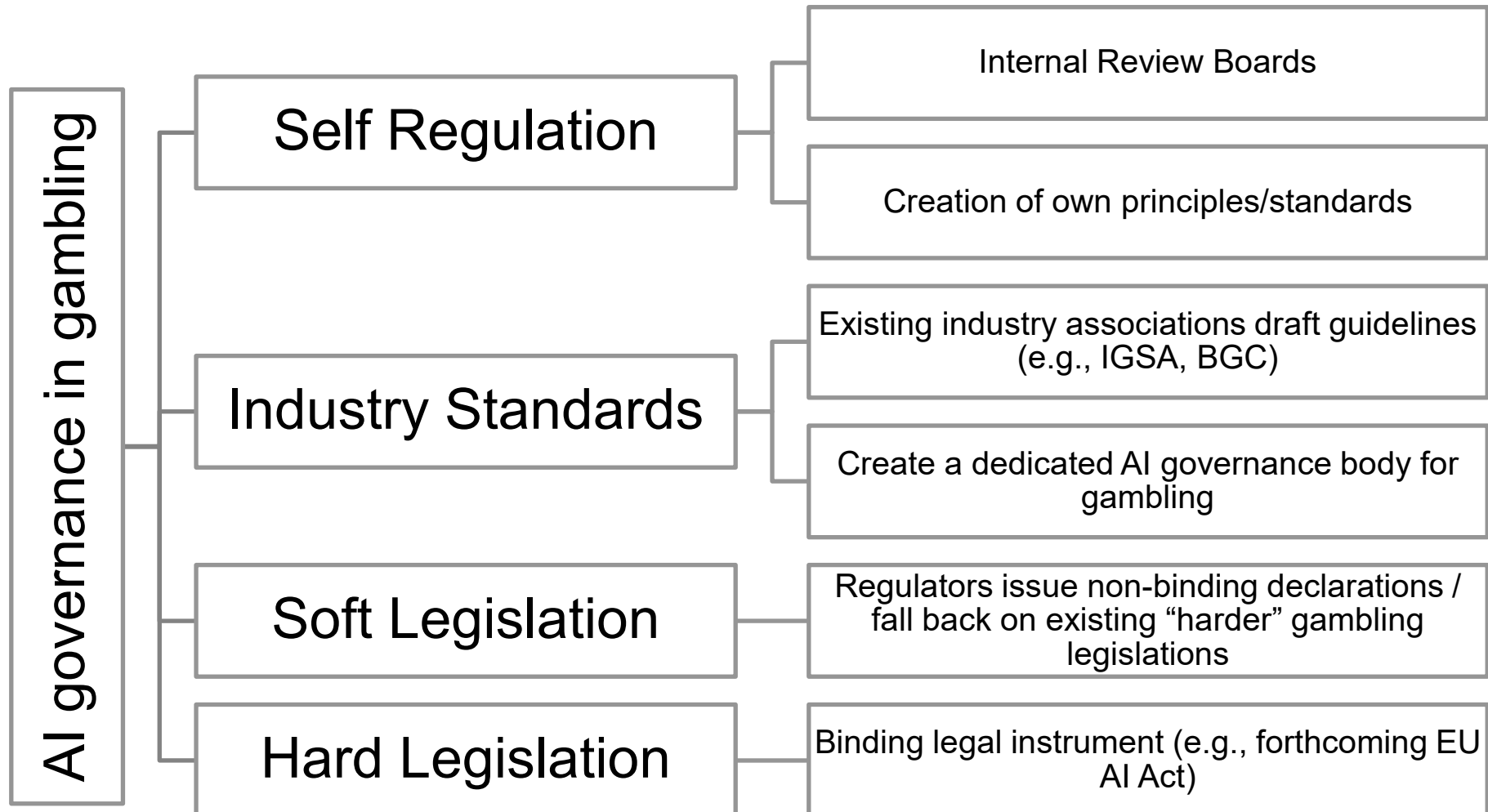
Gambling's Ethical AI Paradox



Do you use existing AI guidelines?



4 potential routes for AI governance



UNLV

INTERNATIONAL GAMING INSTITUTE

Thank you!

Kasra Ghaharian, Ph.D.

Director of Research

kasra.ghaharian@unlv.edu

Knowledge.

Research.

Innovation.