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# A geographic perspective on responsible AI


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# Agenda

What is Responsible AI/ML?

How we engage customers

Responsible AI in Latin America and the Caribbean

Responsible AI in Australia

Questions

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# Responsible AI Definition

An organizational structure, principles, and practice that supports the design, build, and operation of AI systems maximizing benefit while minimizing risks and unintended impact

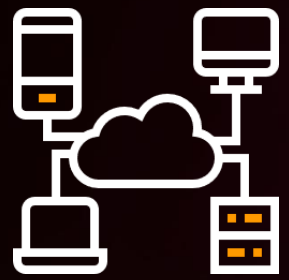
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# How we engage with customers

- Operating approach that maximizes benefit and minimizes risk
- Helps take principles to practice as part of an end-to-end Responsible AI journey



High touch - Working alongside you to **introduce new skills** to your organization



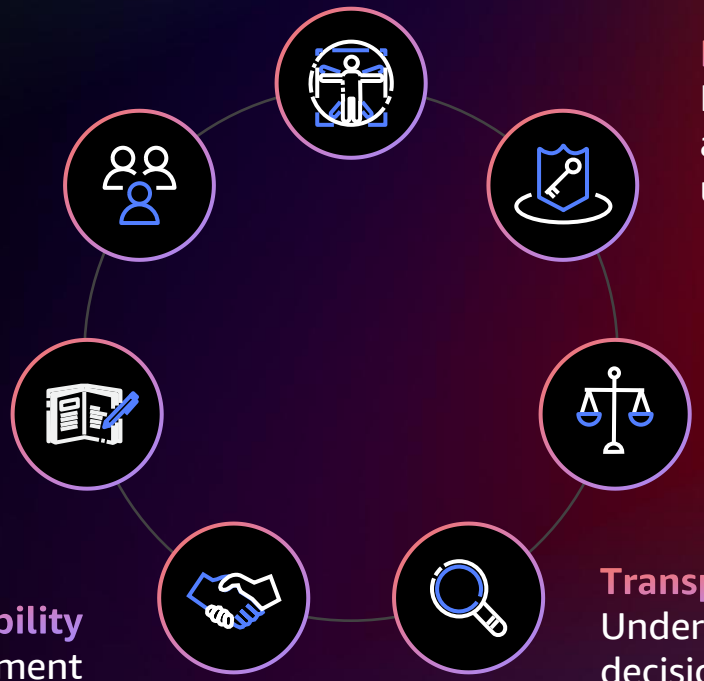
Business & technology – Changing not just **technology**, but **people** and **process**

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# How we engage

**Value alignment**
Systems should be designed and used in ways that align with company mission, social norms, and legal compliance



**Privacy & security**
Protects the quality and integrity of data, model and underlying infrastructure from unauthorized use, access, and processing

**Inclusion**
Incorporation of diverse skills, experiences, perspectives, and cultural backgrounds

**Bias & fairness**
Systems must be designed to minimize bias and promote inclusive representation

**Training & education**
Appropriate knowledge sharing and education to understand purpose, use, and impact

**Transparency & explainability**
Understanding how data is used, how decisions and outcomes are made in a human understandable way

**Accountability**
Structured maintaining human involvement and responsibility for design, development, decision processes, and outcomes

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# Responsible AI/ML – A View from Latin American and the Caribbean

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# Ethical and responsible use of AI

LATIN AMERICA AND THE CARIBBEAN




Human-centered
technology


fAIr LAC




# Latin America and the Caribbean region

# Opportunity

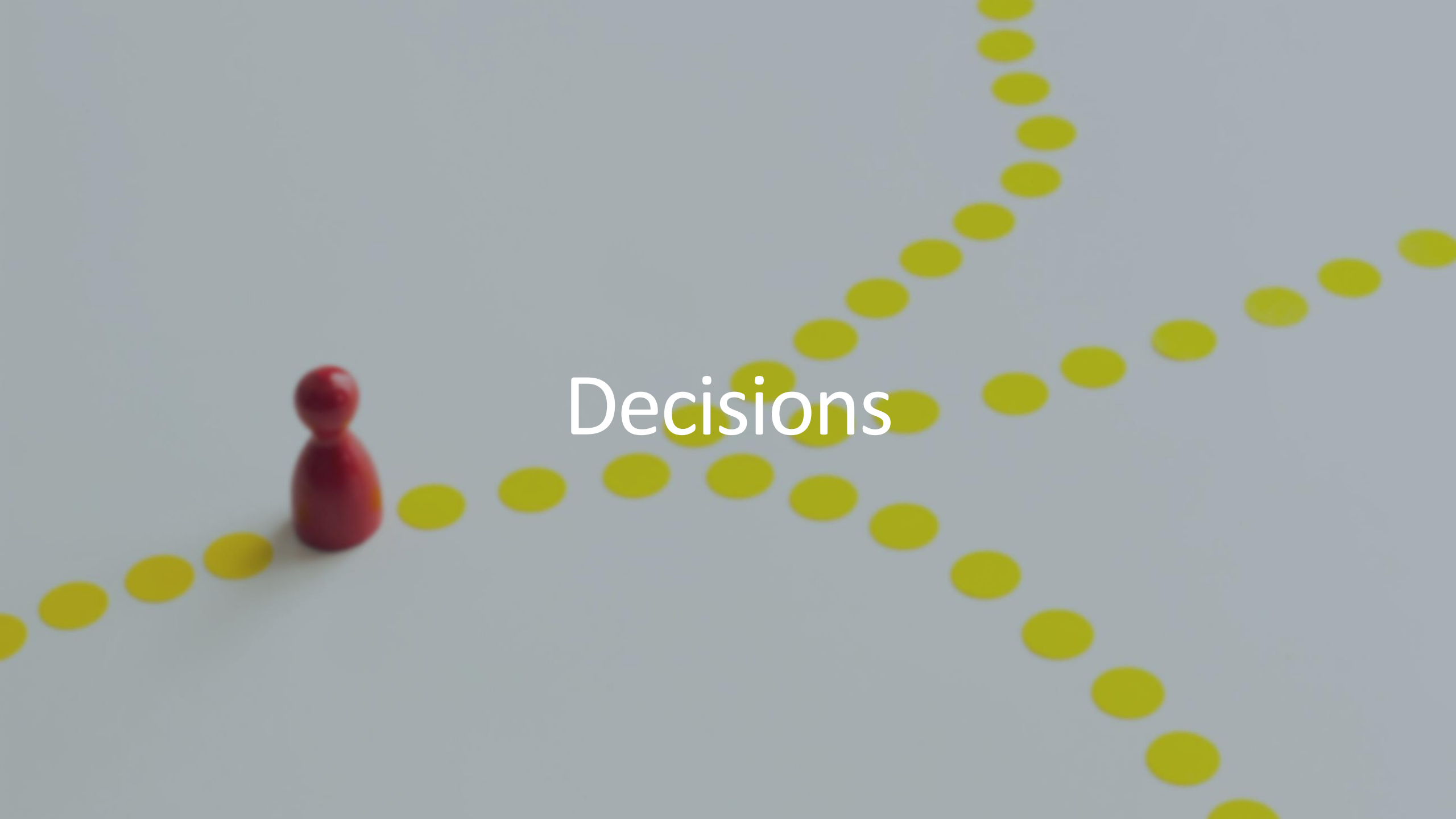



Why is AI so relevant?


Advantage




# High school dropout


Decisions

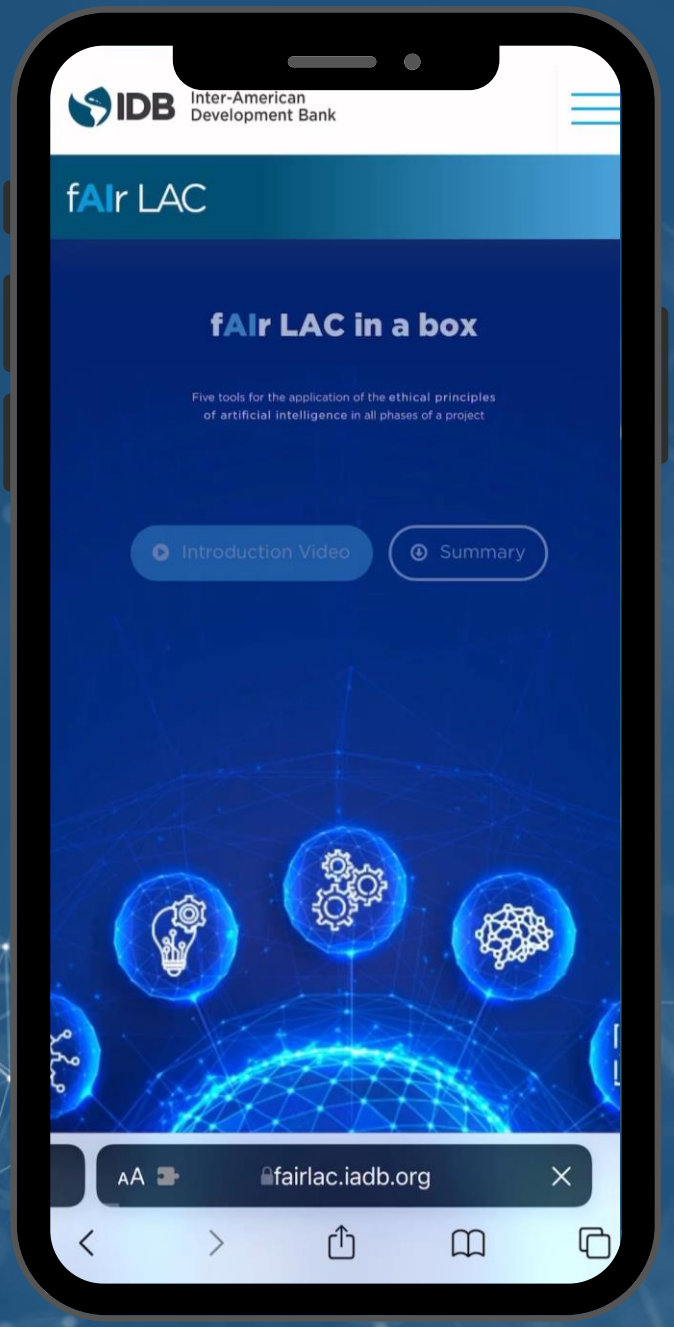


# Frameworks

# From principles to practice



# 5 TOOLS


IDB
Inter-American
Development Bank
fAIr LAC
fAIr LAC in a box
Five tools for the application of the ethical principles
of artificial intelligence in all phases of a project
Introduction Video
Summary
AA
fairlac.iadb.org

# Examples





# Mexico

## DIABETIC RETINOPATHY



# Ecuador

## ADMISSION PROCESS



# Regional

## AI GENDER CHALLENGE



# Government role


¡Muchas gracias!
IDB

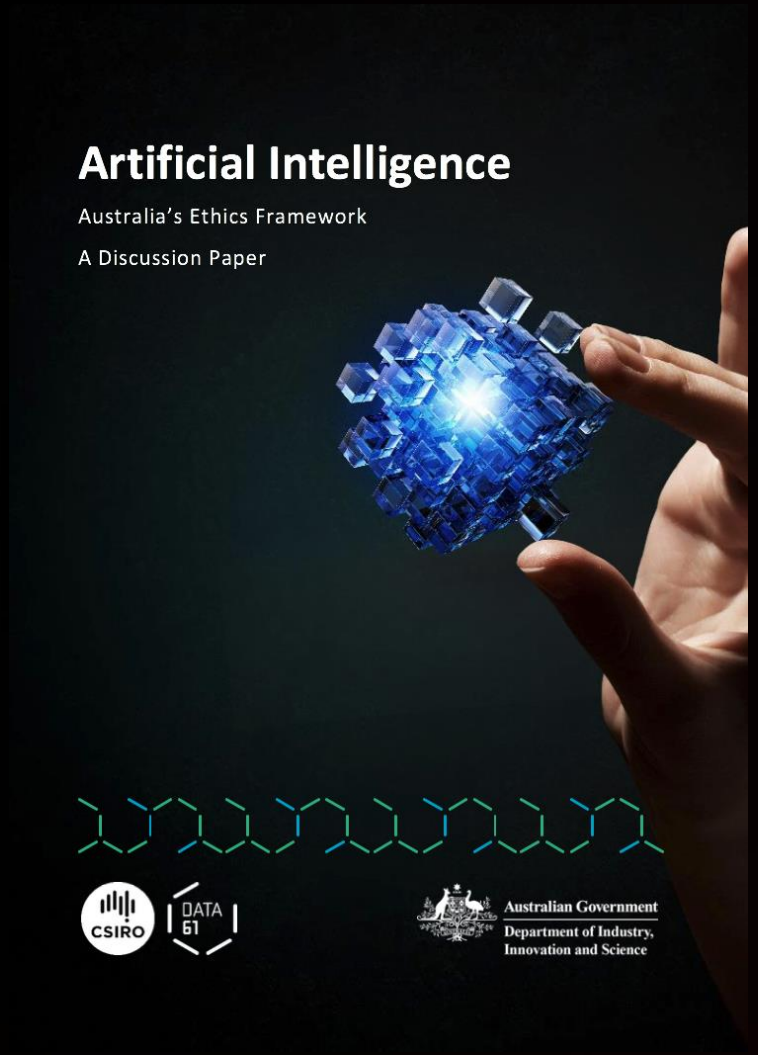
# Responsible AI/ML – A view from Australia

Chris Howard

AI/ML Solutions Architecture Leader APJ
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# Australia – AI Principles at a Glance




- Human, societal, and environmental wellbeing
- Human-centered values
- Fairness
- Privacy protection and security
- Reliability and safety
- Transparency and explainability
- Contestability
- Accountability

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# Contestability

**When an AI system significantly impacts a person, community, group or environment, there should be a timely process to allow people to challenge the use or outcomes of the AI system**

- Aims to ensure the provision of efficient, accessible mechanisms that allow people to challenge the use or output of an AI system, when that AI system significantly impacts a person, community, group, or environment.
- Knowing that redress for harm is possible, when things go wrong, is key to ensuring public trust in AI.
- There should be sufficient access to the information available to the algorithm, and inferences drawn, to make contestability effective

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# Value of Contestability



## Improved Outcome Acceptance

Providing a legitimate way to contest a decision increases a person's perception of procedural fairness



## Improved Perception of Fairness

Having outcome control, the ability to correct or appeal a decision, in a cooperative group allocation task improved participants' perceptions of the fairness of the outcome



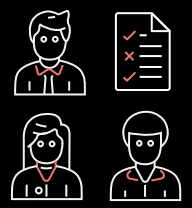
## Improved view of Impartiality

The design of a contestation process (not just its availability) impacts perceptions of procedural fairness

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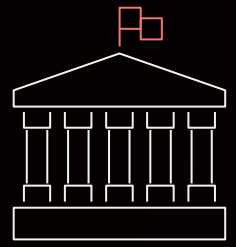
Source: Henrietta Lyons, Tim Miller, Eduardo Velloso. 2020. Fair and Responsible AI Workshop (CHI'20), April 25–30, 2020, Honolulu, HI, USA. ACM 978-1-4503-6819-3/20/04.

# Contestability Functions



## Independent Review

3rd party examination of the process, information, and underlying assumptions used in the AI decision-making process

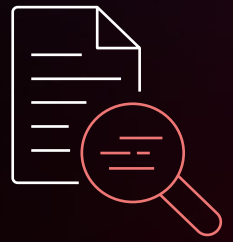


## Due Diligence

Any compliance, legal and regulatory requirements that the decision maker is bound by

+

Responsible AI by Design



## Oversight / Assurance

Multiple forms of authoritative supervision -

- Fallback mechanisms
- Monitoring / Tracing
- human-in-the-loop or human-in-control



## Audit / Review

Typically used in verifying past AI-based decisions and the associated processes

Prior to AI Decision-Making

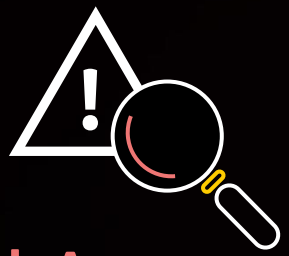
Prior, During, and After AI Decision Making

After AI Decision Making

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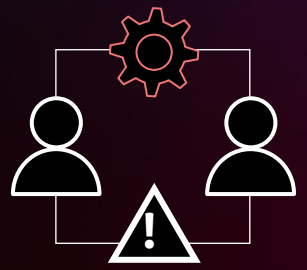
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# Establishing the threshold for ‘significant impact’



## Risk Assessment

- Organization Risk Appetite - Amount and type of risk that an organization is willing to pursue or retain
- Risk Attitude - Organizations approach to assess and eventually pursue, retain, take or turn away from risk



## Risk Management

- Risk Tolerance - Organization’s or stakeholder’s readiness to bear the risk after risk treatment in order to achieve its objectives
- Risk Acceptance - Informed decision to take a particular risk
- Resilience - Adaptive capacity of an organization in a complex and changing environment

ISO 3100 Risk-Management

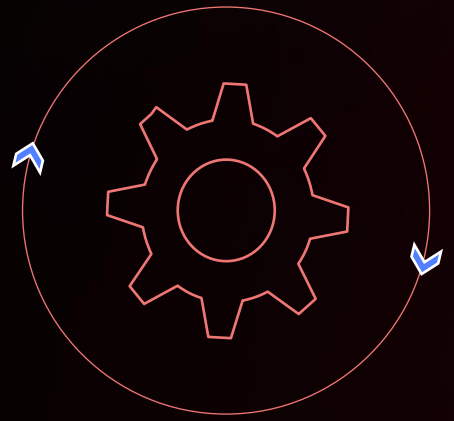
Consider adopting a robust and standardized approach to Risk Assessment (Identification, Analysis, Evaluation) and Risk Management such as the revised ISO31000

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# Monitor, Review, and Report

Monitor the effectiveness of all steps of the risk management process



The effectiveness of treatment/controls needs to be monitored to pick up changing circumstances that may require a change

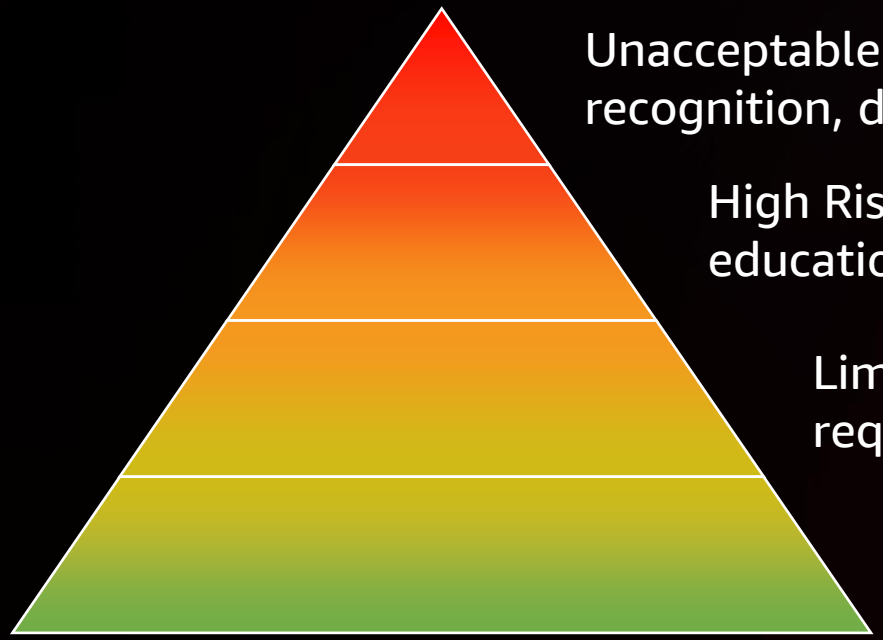
Allow for continuous improvement and corrective actions

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# The Road Ahead – The Brussels Effect

EUROPEAN LEGAL FRAMEWORK FOR AI TO ADDRESS FUNDAMENTAL RIGHTS AND SAFETY RISKS SPECIFIC TO THE AI SYSTEMS



Unacceptable Risk – Social Scoring, facial recognition, dark pattern AI, Manipulation

High Risk – Transportation Systems, employment, education access, border control, justice system

Limited Risk – AI systems with specific transparency requirements such as chatbots, emotion recognition systems

Minimal Risk – AI enabled videogames, spam filters

As per GDPR, this act will become extraterritorial and will influence policy globally over the next few years

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# Questions?

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# Check out other sessions on Responsible AI at re:Invent

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|---|---|---|---|---|
| DEI201-L | **The power of responsibility in AI/ML**<br>*Leadership session* | Monday, 11/28 | 2:30-3:30 PM | Level 5, Palazzo Ballroom B, Venetian |
| AIM328 | **Explain your ML models with Amazon SageMaker Clarify**<br>*Chalk talk* | Tuesday, 11/29 | 2:00-3:00 PM | Level 1, Palmer 2, Wynn |
| AIM213 | **Building more inclusive, responsible AI**<br>*Breakout session (panel)* | Wednesday, 11/30 | 8:30-9:30 AM | Level 2, Venetian Theatre, Venetian |
| AIM342 | **Advancing responsible AI: Bias assessment & transparency**<br>*Workshop* | Wednesday, 11/30 | 2:30-4:30 PM | Level 1, Alliance 307, Caesars Forum |
| AIM341 | **Transforming responsible AI from theory into practice**<br>*Chalk Talk* | Thursday, 12/1 | 4:15-5:15 PM | Level 3, 354, MGM Grand |

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# Thank you!

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