

# RESPONSIBLE AI MADE EASY

## FOR ORGANISATIONS

Using Artificial Intelligence (AI) in your organisation?

Help your stakeholders understand and build their confidence in your AI solutions.

### PRINCIPLES FOR RESPONSIBLE AI



**DECISIONS MADE BY AI SHOULD BE EXPLAINABLE, TRANSPARENT AND FAIR**



**AI SOLUTIONS SHOULD BE HUMAN-CENTRIC**

# 4 AREAS TO CONSIDER



#### INTERNAL GOVERNANCE STRUCTURES & MEASURES

- Clear roles and responsibilities in your organisation
- SOPs to monitor and manage risks
- Staff training



#### DETERMINING THE LEVEL OF HUMAN INVOLVEMENT IN AI-AUGMENTED DECISION-MAKING

- Appropriate degree of human involvement
- Minimise the risk of harm to individuals



#### OPERATIONS MANAGEMENT

- Minimise bias in data and model
- Risk-based approach to measures such as explainability, robustness and regular tuning



#### STAKEHOLDER INTERACTION AND COMMUNICATION

- Make AI policies known to users
- Allow users to provide feedback, if possible
- Make communications easy to understand



FIND OUT MORE ABOUT THE PDPC'S SECOND EDITION OF THE MODEL AI GOVERNANCE FRAMEWORK AT [GO.GOV.SG/AI-GOV-MF-2](https://go.gov.sg/ai-gov-mf-2)

An initiative by:



In support of:



# LEVEL OF HUMAN INVOLVEMENT

A design framework to help determine the degree of human involvement in your AI solution to minimise the risk of adverse impact on individuals.

## SEVERITY AND PROBABILITY OF HARM

LOW

HIGH

### Human-out-of-the-loop

AI makes the final decision without human involvement, e.g. recommendation engines.

### Human-over-the-loop

User plays a supervisory role, with the ability to take over when the AI encounters unexpected scenarios, e.g. GPS map navigations.

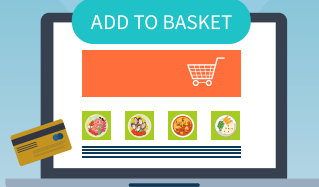
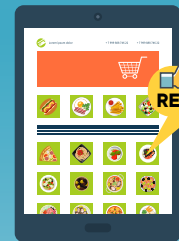
### Human-in-the-loop

User makes the final decision with recommendations or input from AI, e.g. medical diagnosis solutions.

## HUMAN INVOLVEMENT: HOW MUCH IS JUST RIGHT?



An online retail store wishes to use AI to fully automate the recommendation of food products to individuals based on their browsing behaviours and purchase history.



### What should be assessed?

#### What is the harm?

One possible harm could be recommending products that the customer does not need or want.

#### Is it a serious problem?

Wrong product recommendations would not be a serious problem since the customer can still decide whether or not to accept the recommendations.

#### Recommendation:

Given the low severity of harm, the human-out-of-the loop approach could be considered for adoption.