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DIM: CLOUD - Decision Influence Model: Cultural Limitations On User Decisions [poster]

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DIM: CLOUD

Decision Influence Model: Cultural Limitations On User Decisions

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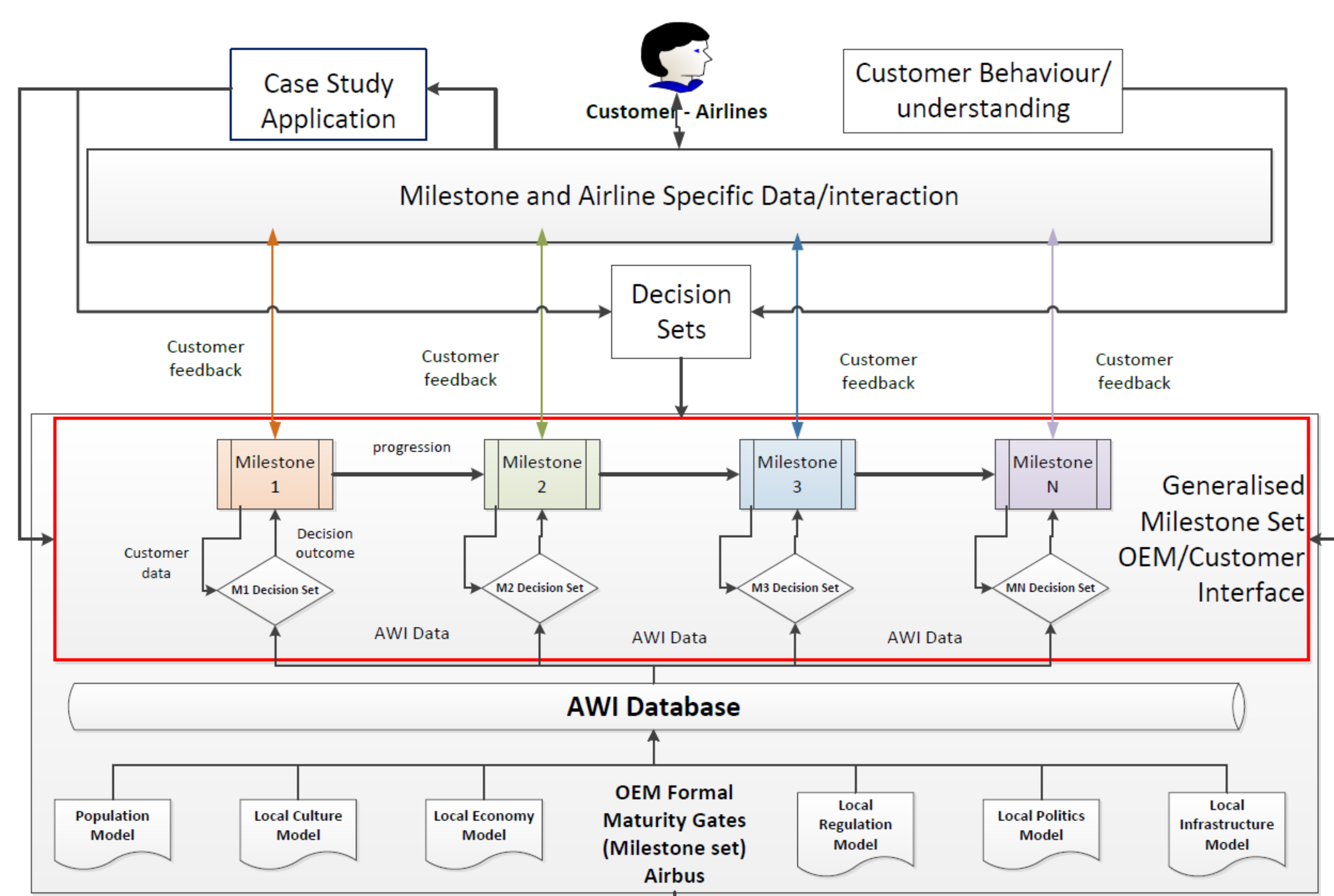
Aims

This research is part of an Innovate UK project, **Agile Wing Integration (AWI)** which aims to evaluate future technology concepts for the **aviation industry**.

The aim of this model is to aid in the decision making process with regard to the progression of aviation technology concepts to products. The application of the model is in the context of assessing **future concept technologies** and developing an understanding of potential customer interest for the concepts.

The focus of the model is understanding **the influences** on **key decision milestones** for the concept development. The model does not just factor in the economic influences upon the decisions but includes the impact of the **cultural attributes** of the **stakeholders** involved. The goal is to help answer 'What is the likelihood of a customer acquiring aircraft with the concept in question?'

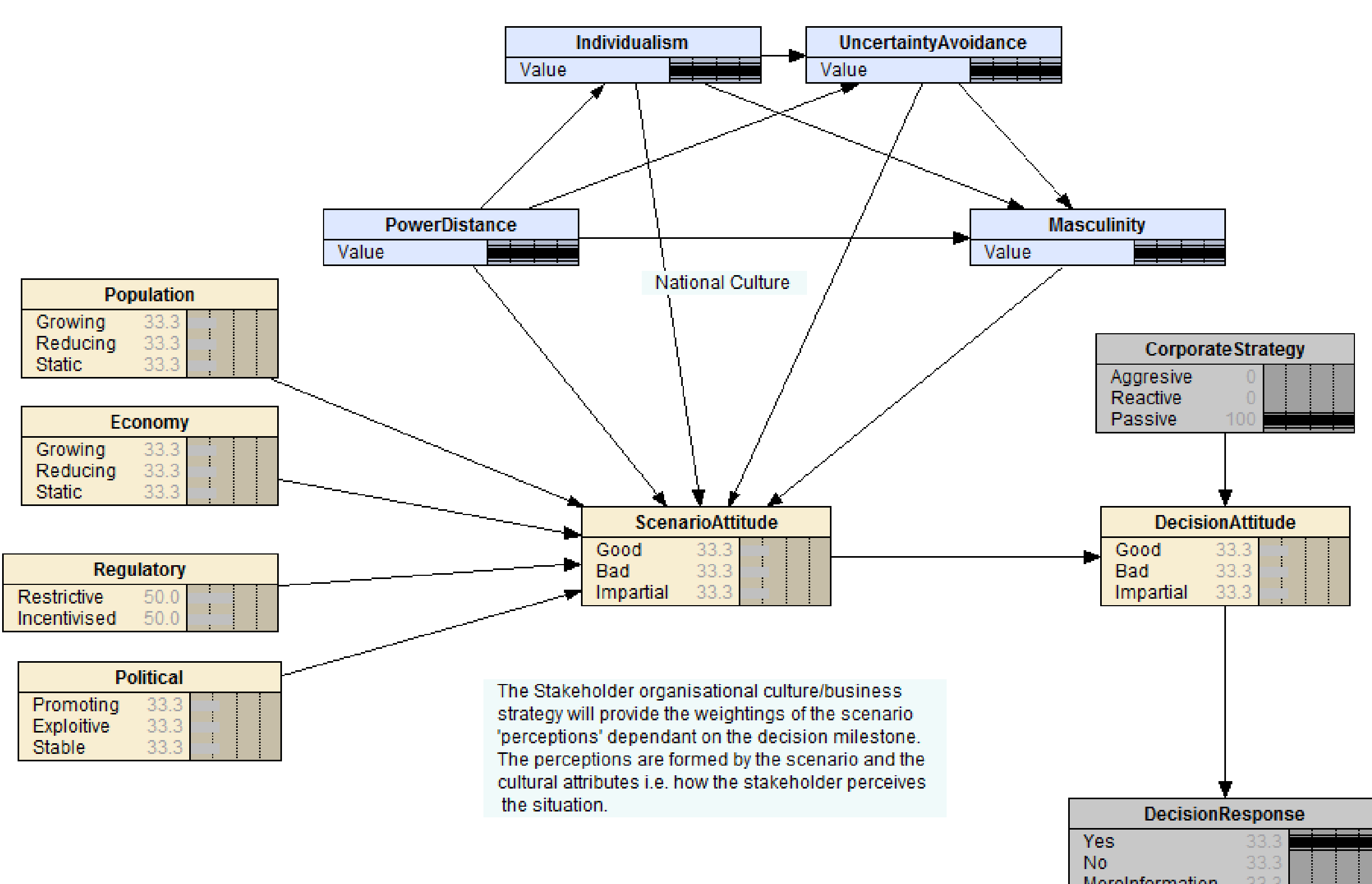
Concept Technology Milestone Process



To model decision likelihoods of milestones along the development lifecycle based upon knowledge of the customer culture and commercial environment.

DIM - Bayesian Belief Network (BNN) Model

The use of Bayesian Network modelling is being assessed to identify the key decision points within a process and model the probability of an outcome, taking into account influences associated with the decision point and decision making agent.



Model Context

The AWI project has an overarching goal to assess potential **future value drivers and technologies** within the **Air Transport System (ATS)**. The DIM: CLOUD is part of this effort with a specific focus on the wider influences on the uptake of future technologies within the ATS.

The ATS operates at a global scale integrating a number of different organisations and countries. There is a need to understand the **impact of culture** on decisions within this **cross-cultural operational space** for the ATS. These wider influences on the decisions associated with the acquisition of aircraft is being investigated.

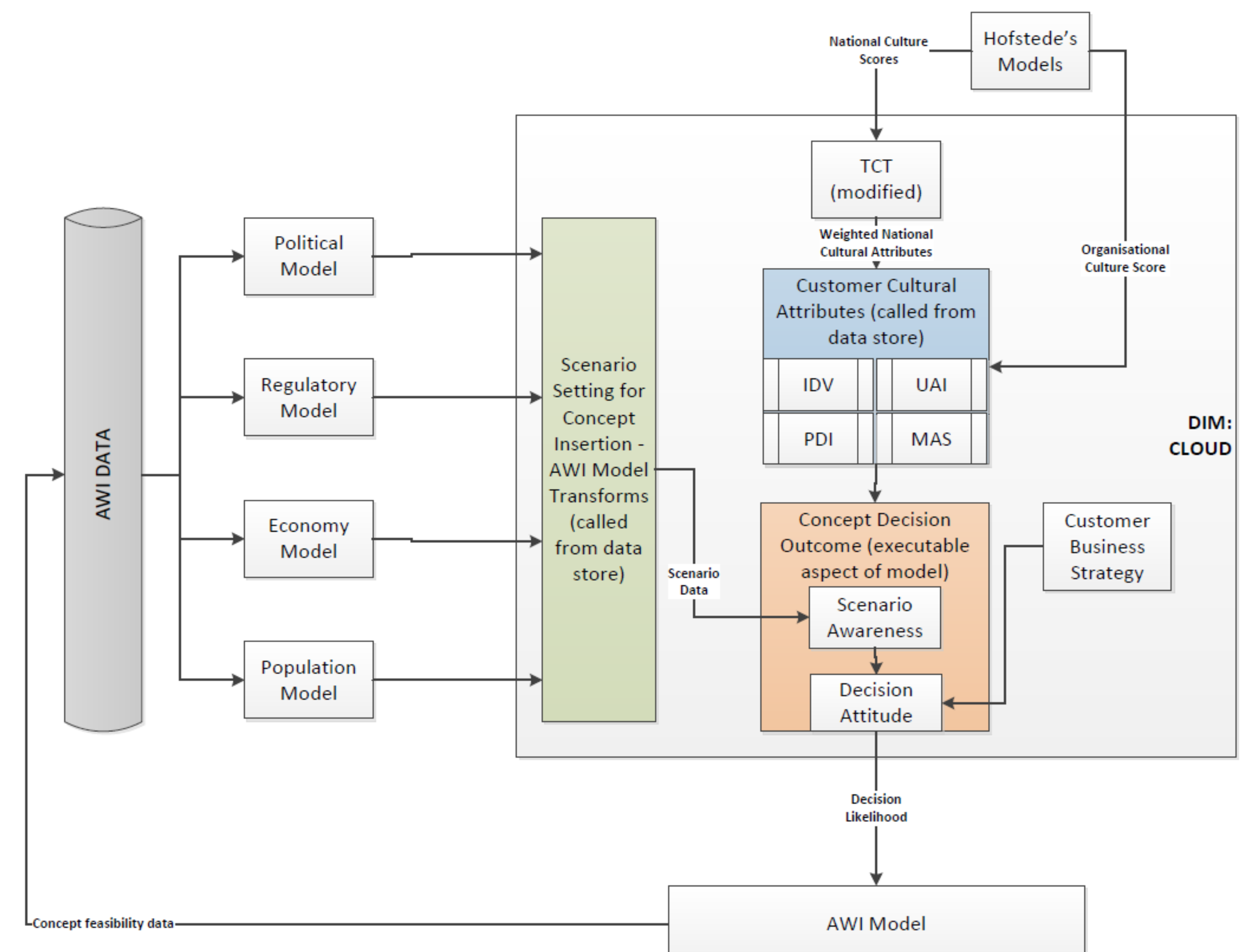
The **Concept Technology Milestone Process** was developed to provide a framework for setting and modelling a narrative between the OEM and the Customer ;it is the **concept maturity progression** framework used for this research. The DIM: CLOUD integrates with this process as it will model the **probable decision outcome** at each of the **milestones** for a concept technology.

Case Studies

The model will be applied across four case studies which cover four focus airlines from within the AWI project. These four airlines cover the major operational areas of the aviation sector which are the United State, Europe and Asia.

Airline behaviours will be modelled within the context of a variety of possible future scenarios.

Model Overview Block Diagram



Acknowledgements & Contact Details

PhD Supervisor:
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AWI Project WP 1 and 6 Lead:

Prof Michael Henshaw
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Ian Marr (Airbus UK)

AWI Project

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