



Temasek Defence Systems Institute

A SYSTEM APPROACH TO DEVELOP A DEFENCE ACQUISITION STRATEGY FOR A SMALL STATE

Wong Wee Sian
Dr Tim Ferris

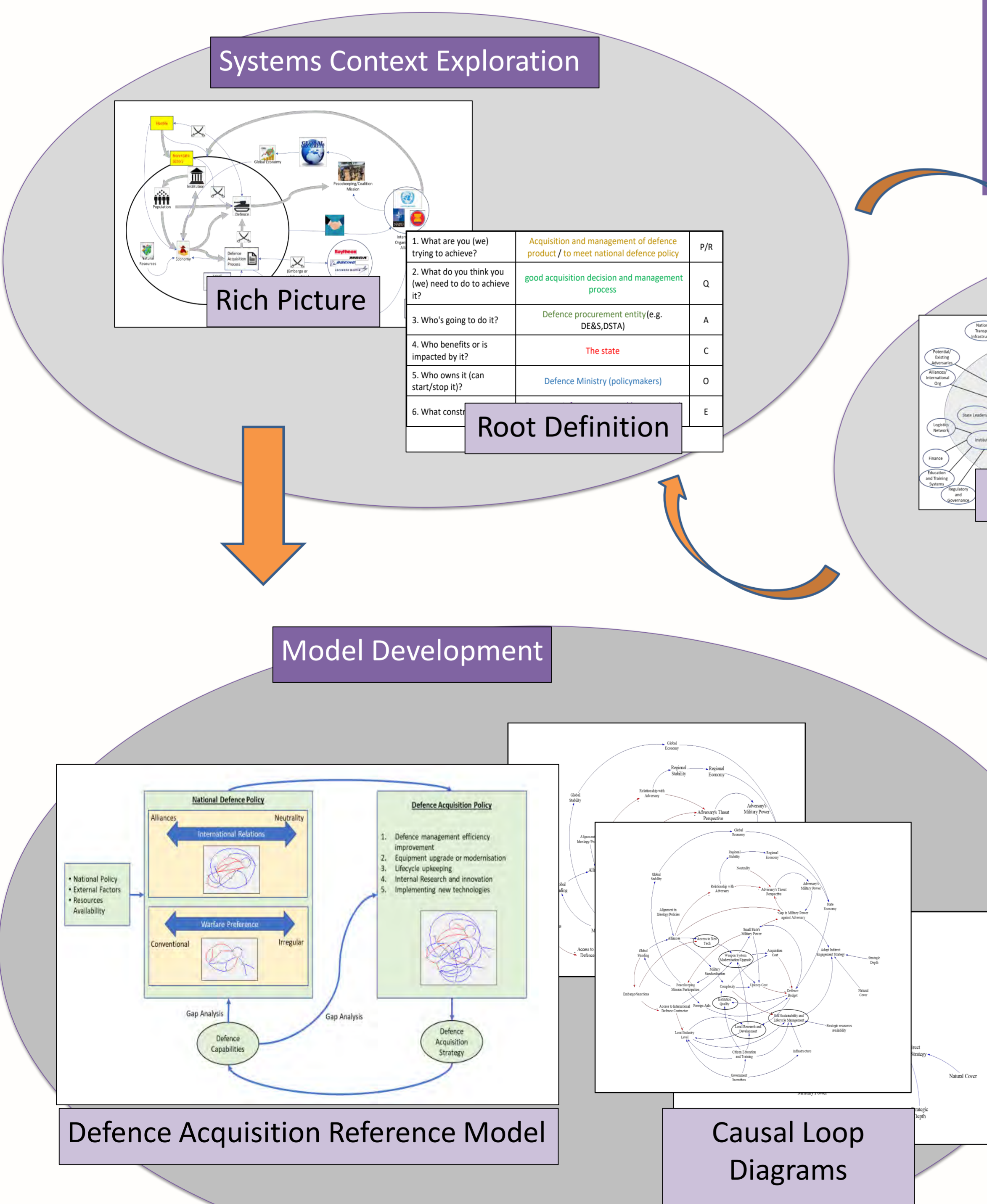
Objective

- Small states are believed to have less aggregate structural power than large states and are limited in their ability to develop their military capabilities and their defence acquisition policy
- Develop a reference model which enables small state in selecting the most appropriate approach to defence acquisition planning, suitable for its situation and environment.

Approach

- Using soft systems approach to:
 1. explore the complexities that revolve around small states and identify the factors that influence small states decision making
 2. define and bound a problem space in which the developed framework should encompass within.

Systems Approach and Model Development

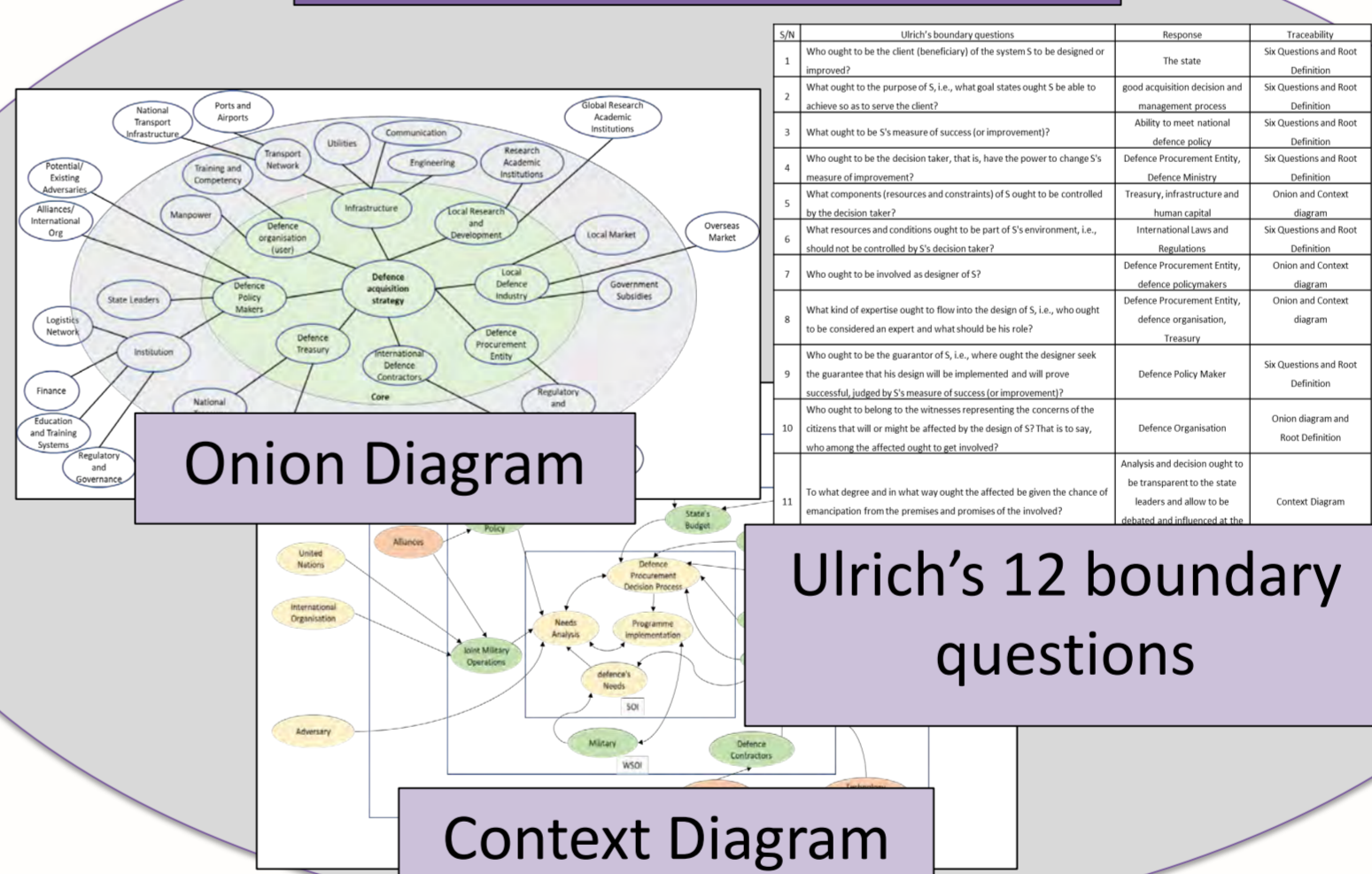


Model Validation

Using Singapore's context

	Actual	Derived from model
National Defence Policy	<p>Deterrence Strong and capable SAF</p> <p>Diplomacy Establish strong and friendly international relations, through extensive interactions and cooperation, with defence establishments and armed forces in the region and around the world—participation as a responsible member of the international community in helping to uphold international rules and norms.</p>	<p>Military Strong and competed defence forces that prioritise in conventional operations, to create a strong deterrence</p> <p>Diplomacy Position itself mid-range of the international relations continuum. Adopt strategic hedging approach towards the relations with the US and China.</p> <p>Maintain good ties with Indonesia and Malaysia, and create stability region. Establish defence ties with other armed forces in the region.</p>
Defence Acquisition Policy	<p>(1) Develop capabilities to counter 'hybrid' threats in the information and cyber domains.</p> <p>(2) Expand counter-terrorism capabilities, specifically in improving Island Defence and Special Forces.</p> <p>(3) Leverage on advanced emerging technologies such as artificial intelligence, data analytics, and robotics in nearly all aspects of defence planning and military operations</p>	<p>Diversify defence equipment sources and invest in the local defence industry, to mitigate the risk of over-dependency on a single source.</p> <p>Research and innovate niche technology to improve off-the-shelf military systems.</p> <p>Incorporation of advance technology to improve efficiency within the military organisation, as a force multiplier to maintain its military edge.</p>

System Boundary Definition



Application of Reference Model and Future Works

- The development of reference model can be used to help **analyse complex issues** and **systemically develop policies and strategies**.
- Validation and review of reference model can identify shortcomings and context change, such that adjustment can be made.
- The developed reference model covers only the core elements and relationships.
- Further research will need to be conducted to identify other factors such as **culture, religion** and **ethnic relations**

