

Agility Quotient (AQ)

19th ICCRTS

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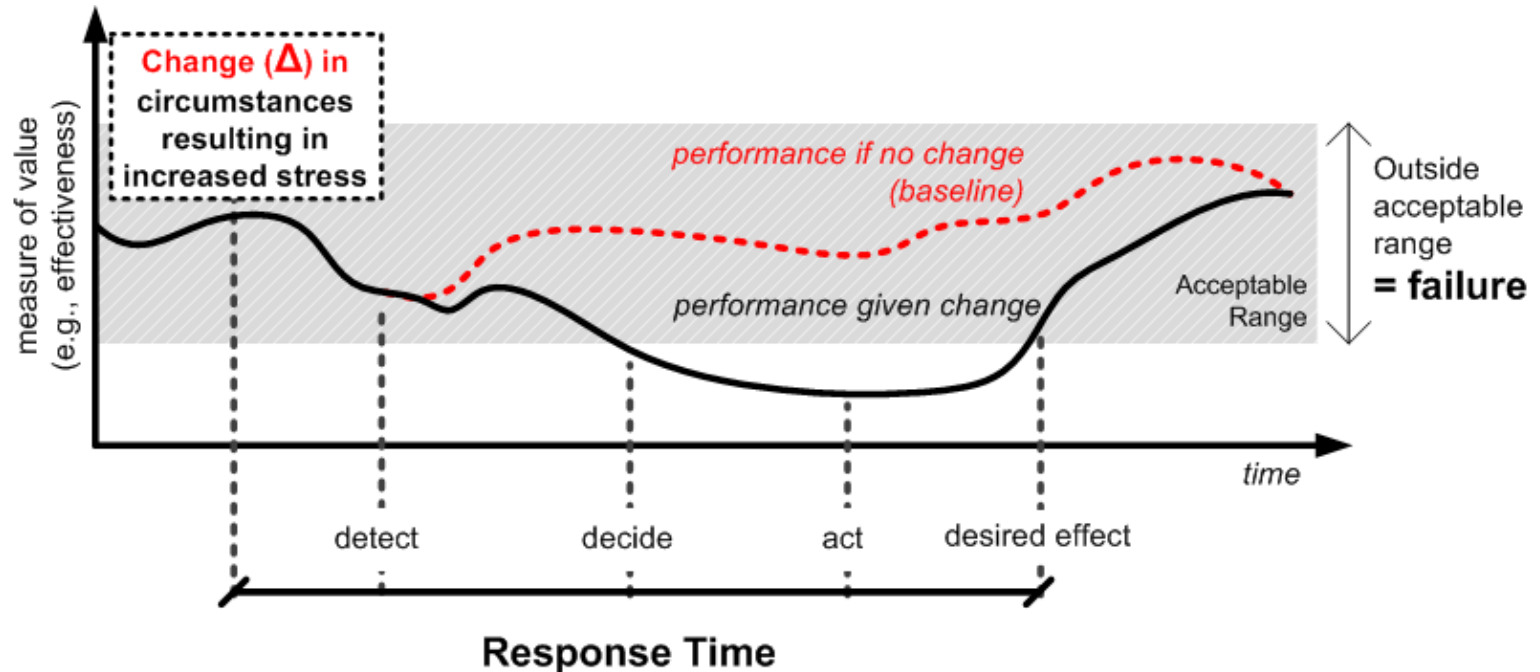
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- Agility has moved from a 'nice to have' to a 'must have'
- Progress depends upon our ability and willingness to observe and measure
- Measuring the agility that is manifested has its limitations
- Scenario based simulations to predict agility have their limitations
- A measure of potential agility or Agility Quotient (AQ) is needed as well
- AQ is expected to be a function of the Enablers of Agility

- Definitions and terms differ across communities
- Agility is a necessary response to the challenges posed by complexity and dynamics of the system, the environment, and the interactions between them
- Agility is about success, maintaining or improving performance in the face of stresses and in circumstances
- Agility has passive, reactive, and pro-active aspects

Manifest Agility

- Manifest Agility can be directly observed, but only when circumstances require it and only if a system responds appropriately.
- A lack of manifest agility can also be directly observed

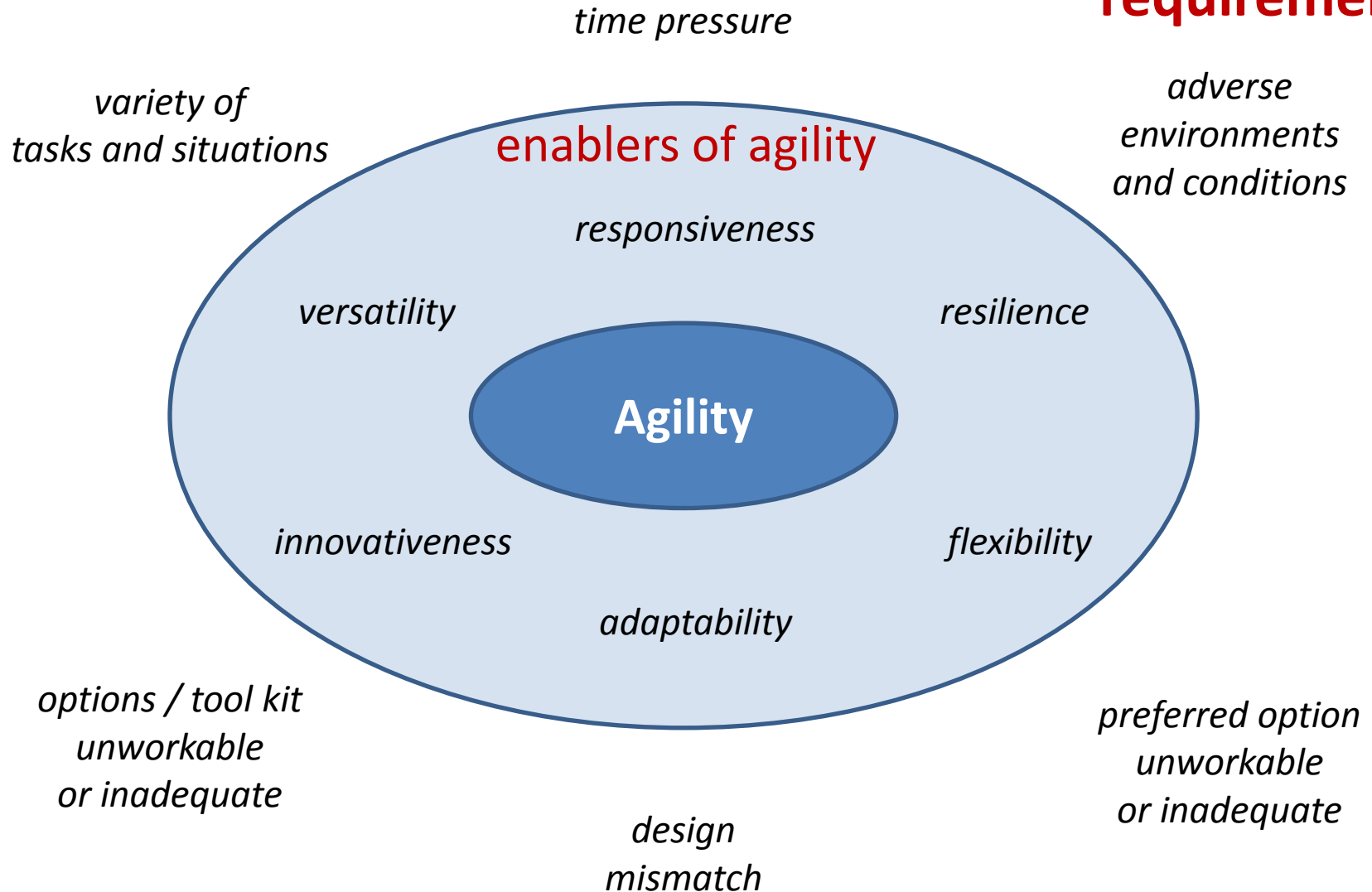


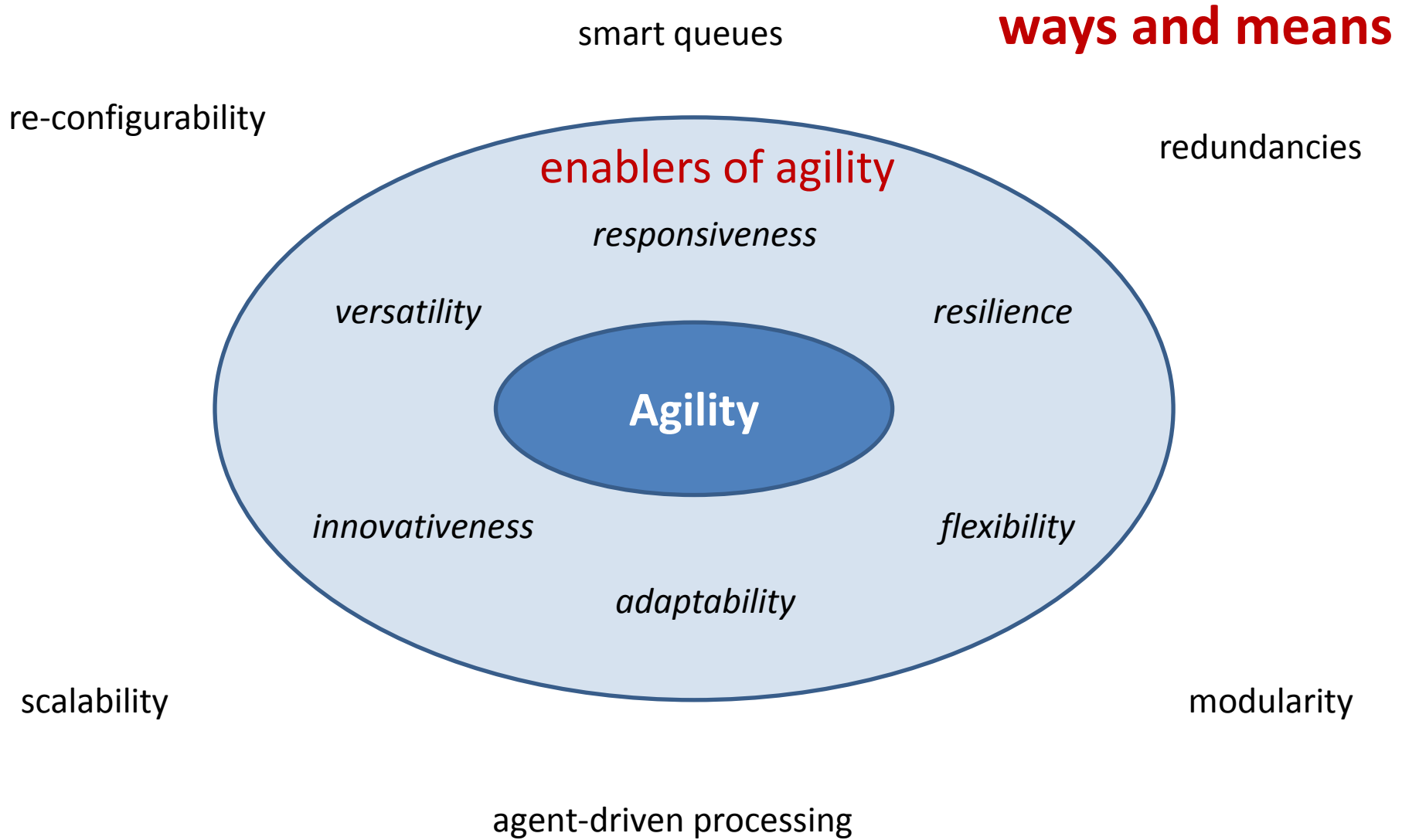
- While one can directly observe and measure the agility an entity manifests or fails to manifests, one cannot assess the agility that an entity is capable of using only these data points.
 - Very limited sample of potential stresses and changes in circumstance
 - History is not an accurate predictor
- Simulations can add to our understanding but also have their limitations
 - Lack of fidelity
 - Biases in selecting scenarios / stresses
- Takeaways
 - Employ scenarios thoughtfully – avoid reliance on most likely
 - ***Need to augment with a measure that does not rely on scenarios***

- AQ is a measure of Potential Agility based upon an entity's 'design' and its agility-related characteristics
- AQ is meant to complement measures that are based upon
 - actual experiences
 - scenario-based approaches that 'predict' expected conditions

Enablers of Agility

requirements





- Agility is an essential system's capability
- Improving Agility requires observation and measurement of agile behaviors and their enablers
- Measuring the agility that is manifested is not enough
- Scenario based simulations also have their limitations
- We need to be able to estimate Potential Agility (AQ)
- A model of AQ can be built based upon the Enablers of Agility and the ways and means these enablers can be actuated