Understanding Individual Agility

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Human Factors Integration Defence Technology Centre

Topics covered

- HFI DTC overview
- Background to project
- Methodology
- Key findings
- Recommendations for future work

HFI DTC Consortium

BAE SYSTEMS
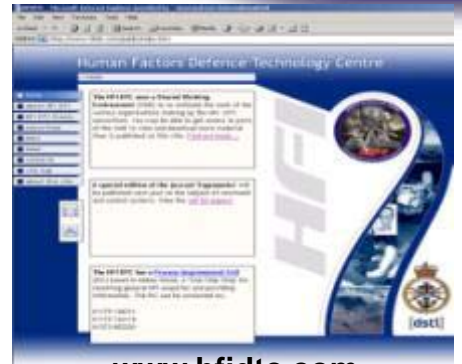
Prime

Commercial   *Academic*

MBDA MISSILE SYSTEMS

>sea
a Cohort plc company

LOCKHEED MARTIN

UNIVERSITY OF BIRMINGHAM

UNIVERSITY OF Southampton

Cranfield UNIVERSITY

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SHARED WORKING ENVIRONMENT

MAIN CAMPUS (Bedford)	DCMT Shrivenham (Defence College of Management & Technology)

- ## UK MOD
  - Future Character of Conflict Paper by DCDC
  - Focus on concept of agility
  - *"must be institutionalised at all levels from the organisation to the individual"*
  - *"UK must make people the edge"*
  - *"mental agility will be a fundamental pre-requisite for institutional agility"*

Ministry of Defence

Strategic Trends Programme
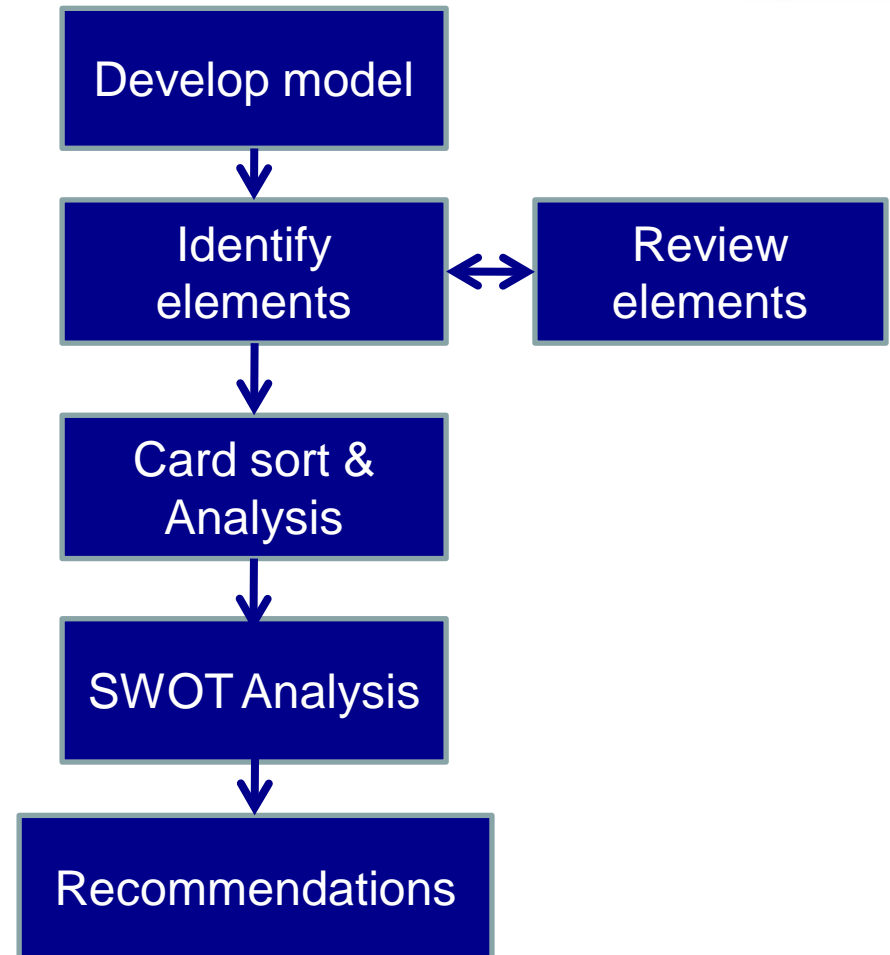**Future Character of Conflict**

DCDC
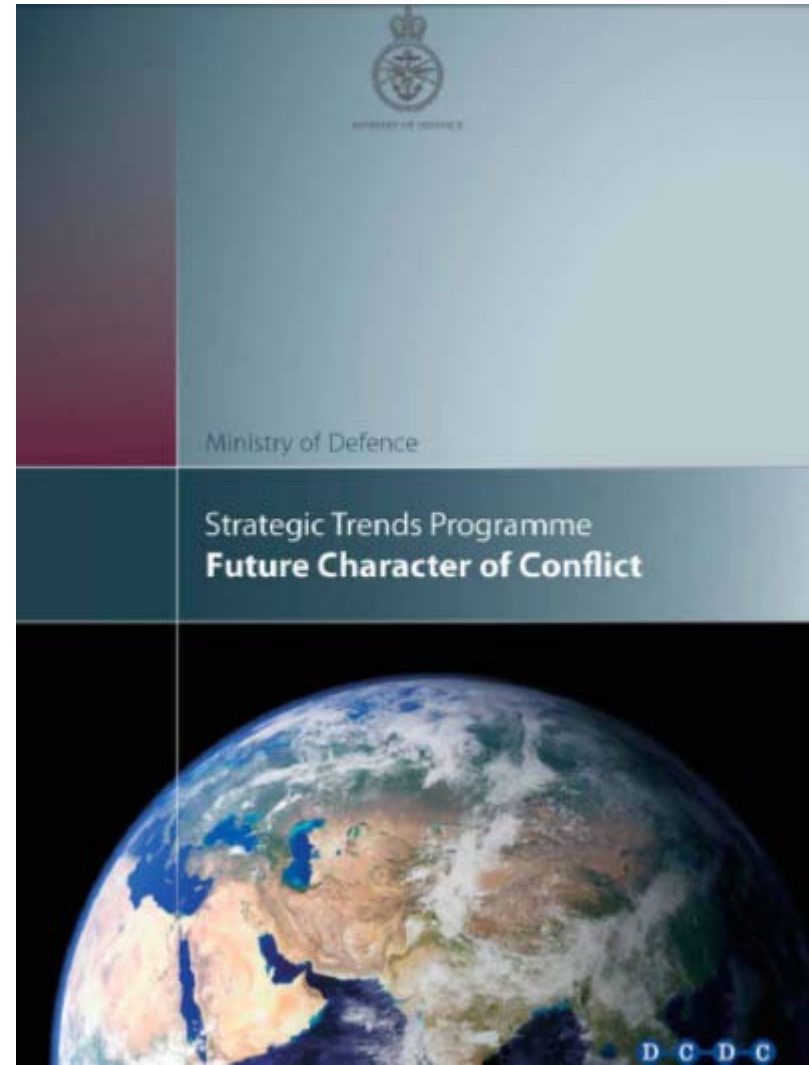
Objective

- Identify from a Human Factors perspective the issues, risks and opportunities associated with individual agility

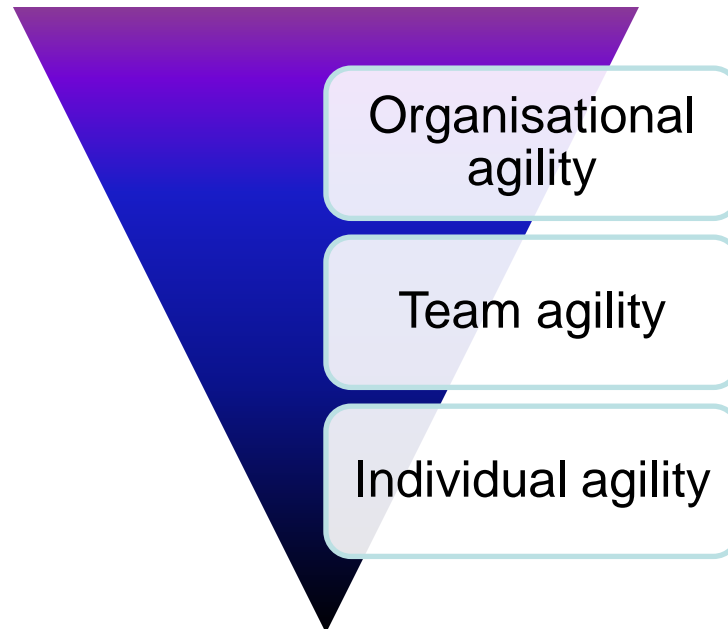- Understand the concept of individual agility

Methodology

- Develop model
- Identify elements
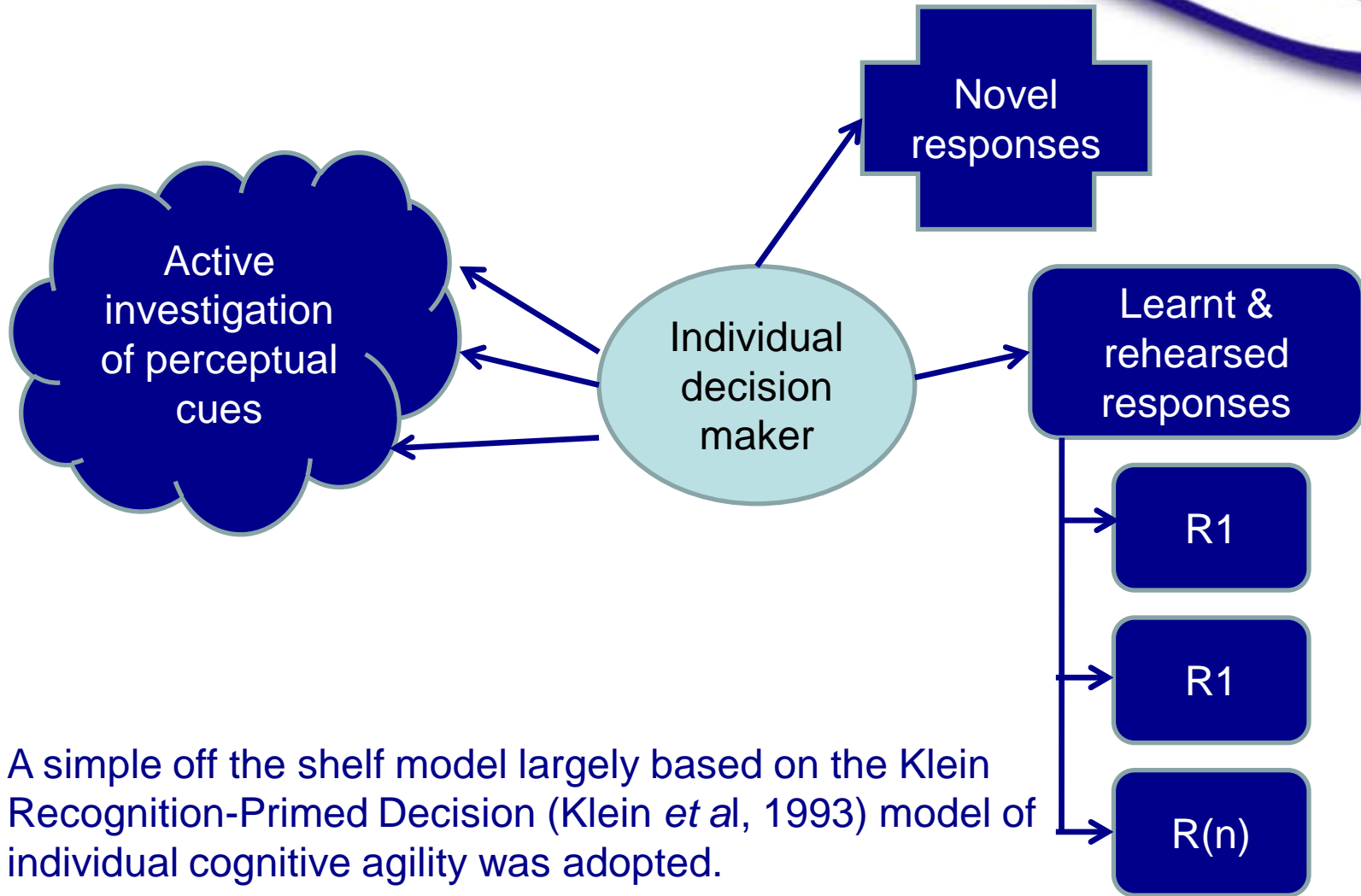- Review elements
- Card sort & analysis
- SWOT analysis

What can we do to assist individuals to be agile and what is the evidence to support this?

"*The ability to perceive and adapt to new requirements before failing*"

Organisational agility

Team agility

Individual agility

Develop Model of Agility

Novel responses

Active investigation of perceptual cues

Individual decision maker

Learnt & rehearsed responses

R1

R1

R(n)

A simple off the shelf model largely based on the Klein Recognition-Primed Decision (Klein *et a*l, 1993) model of individual cognitive agility was adopted.
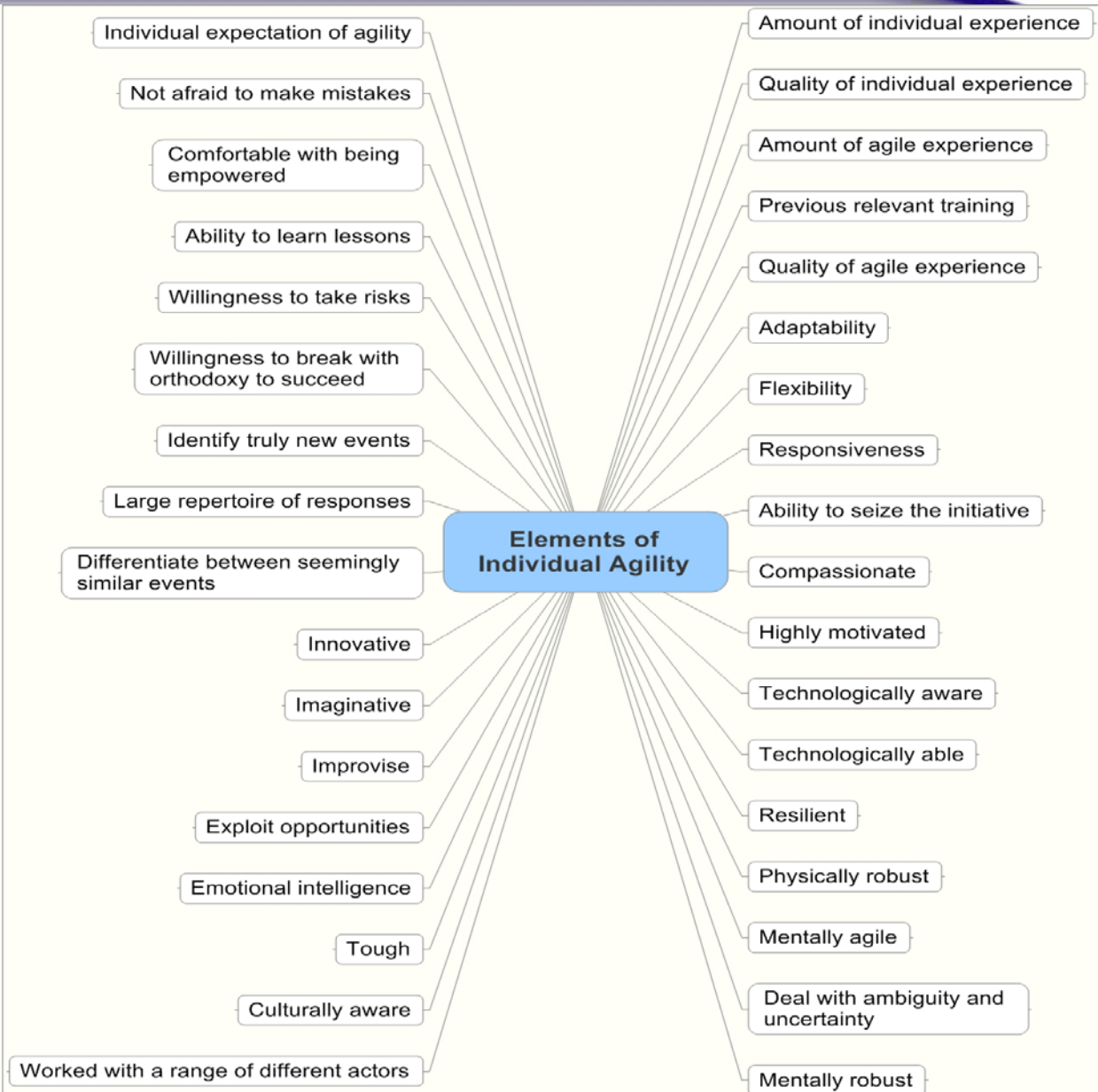
Examine literature

- UK MOD documents reviewed to extract high-level topics relating to agility

- Generated a number of 'elements'
  - Conceptual building blocks

- Reviewed with stakeholders and SMEs to ensure suitability

Identify elements

Elements of Individual Agility

- Individual expectation of agility
- Not afraid to make mistakes
- Comfortable with being empowered
- Ability to learn lessons
- Willingness to take risks
- Willingness to break with orthodoxy to succeed
- Identify truly new events
- Large repertoire of responses
- Differentiate between seemingly similar events
- Innovative
- Imaginative
- Improvise
- Exploit opportunities
- Emotional intelligence
- Tough
- Culturally aware
- Worked with a range of different actors
- Amount of individual experience
- Quality of individual experience
- Amount of agile experience
- Previous relevant training
- Quality of agile experience
- Adaptability
- Flexibility
- Responsiveness
- Ability to seize the initiative
- Compassionate
- Highly motivated
- Technologically aware
- Technologically able
- Resilient
- Physically robust
- Mentally agile
- Deal with ambiguity and uncertainty
- Mentally robust

Data analysis and collection

- Small sample of 12 participants
- Card sort to identify patterns and trends to define what is agile behaviour and where it can be most effectively supported (recruitment, training, experience)
- Define dimensions of agility from individual perspective
- Analysis of top 5 areas

Frequency Analysis

- **Recruitment:** emotional intelligence, imaginative, mentally agile, highly motivated
- **Training:** physically robust
- **Experience:** comfortable with being empowered, identify truly new events, large repertoire of responses, worked with a range of different actors, compassionate and amount of agile experience

Frequency Analysis
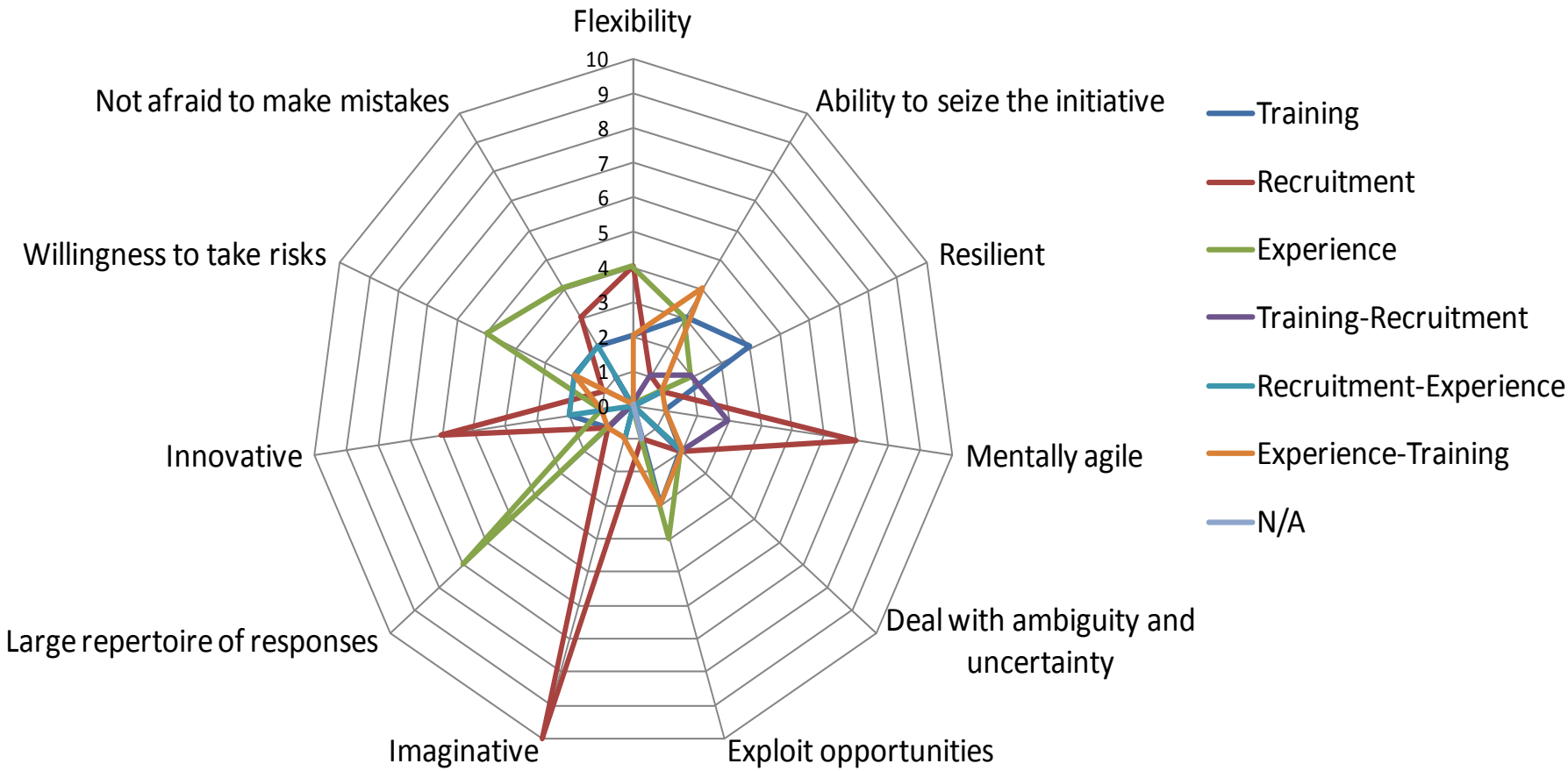
Cluster Analysis

1. **Cognitive aspects of individual agility:** innovation, imagination, emotional intelligence, mental agility

2. **Strength needed for agility:** tough, mentally robust, physically robust, highly motivated

3. **Skills needed for agility:** culturally aware, technically aware, expectation of agility, resilient, ability to deal with ambiguity, technically capable, compassionate, previous relevant training

Cluster Analysis

4. **The outcome of experienced command: t**ake risks, differentiate between seemingly similar events, willingness to break with orthodoxy to succeed, identify truly new events, exploit opportunities and seize the initiative

5. **Characteristics required to become agile:** improvise, responsiveness, ability to learn lessons, flexibility and adaptability

6. **How to attain agility:** amount of agility experience, worked with a large range of actors, quality of experience, not afraid to make mistakes, comfortable with being empowered, large repertoire of responses, quality of agile experience, amount of experience

SWOT Analysis

Strengths	Weaknesses
Elements identified Common themes	Poor definitions and understanding No measurements Understanding of team agility
Opportunities	**Threats**
Create measures for recruitment, training and build into experiences Explore recruitment elements Build core competency Assist leaders to communicate agility	Lack of organisational enablers Complex interaction of individual, team and organisational factors

Conclusions

- Individual agility is multi faceted
- It can be broken down into numerous elements
  - 35 elements were identified
- Cluster analysis identified 6 distinct clusters, which have been (provisionally) labelled as follows:
  1. Cognitive aspects of individual agility
  2. Strength needed for agility
  3. Skills needed for agility
  4. The outcome of experienced command
  5. Characteristics required to become agile
  6. How to attain agility

Recommendations

1. Similar activity with larger number of respondents
2. Gather military case studies
3. Research team agility in relation to the elements
4. Explore organisational characteristics
5. Explore non-military creative and innovative thinking training
6. Identify reliable measures of individual and team agility
7. Explore cognitive underpinnings of the skill set of key military tasks
8. Adopt a systems thinking approach

Recommendations

9. Deal with ambiguity and uncertainty
10. Develop measures for recruitment
11. Enhance individual agility
    - Training
    - Opportunities for flexible behaviour and thinking during and after experiences
    - Opportunities to seize the initiative
    - Explore types of experience that increase a soldier's repertoire of responses
    - Looking at ways of exploiting opportunities through training and experience
    - Allowed to take intelligence risks (and fail)
    - Learn from mistakes through experience

Questions?