Including Organizational Culture Parameters in Work Processes

Holly A. H. Handley
Pacific Science & Engineering Group
handley@pacific-science.com

Nancy J. Heacox
Pacific Science & Engineering Group
heacox@pacific-science.com

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Modeling and Simulation of Human Decision-Making

A model has been developed that incorporates personal and environmental variables into the decision-making process:

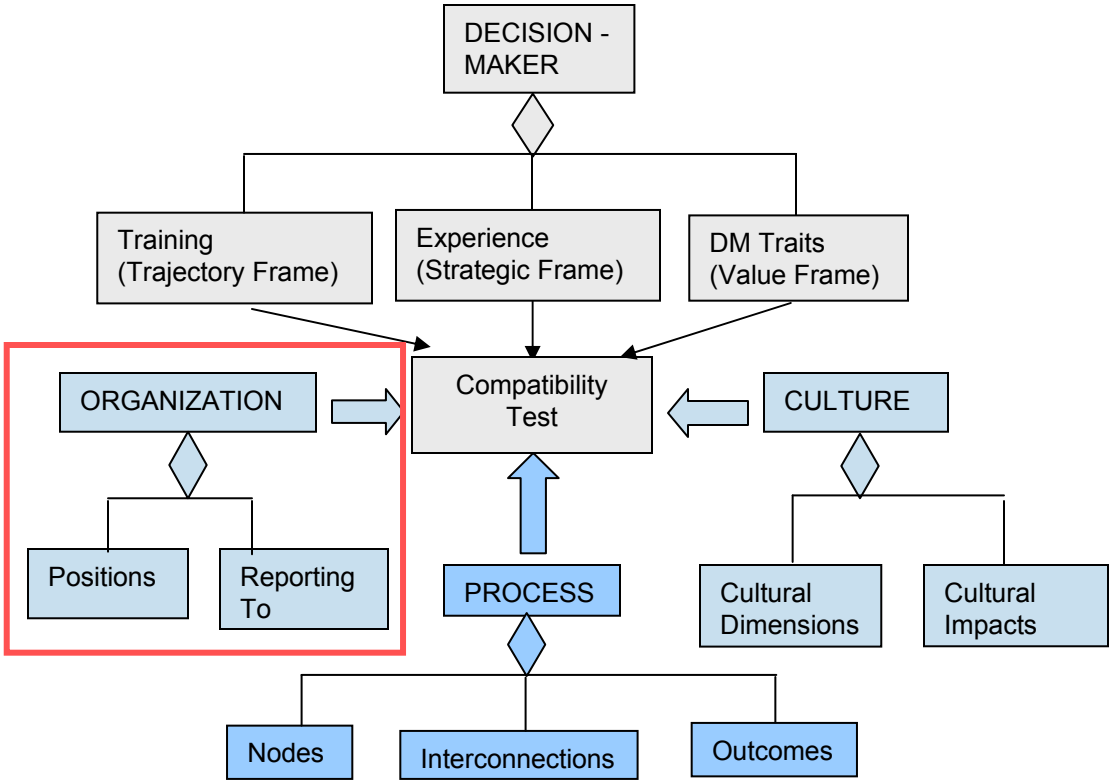
- Culture – Eight Dimensions based on Nationality
- Decision-maker – Training and Experience
- Process – Sequence, Type and Complexity of Tasks
- Organization – Authority and Interface Culture

The variables from each of the component models interact in an integrative decision space.

The decision space algorithm allows the effects of the different parameter values to influence the process outcomes:

- Accuracy – Freedom from error
- Completeness – No part lacking
- Timeliness – At the correct time

Integrative Decision Space Model: Relationship between Components



Organizational Component Enhancement

The focus of the initial work was on including the national culture of the individual decision-makers.

The resulting model had a limitation:

- The model could not predict outcome changes for a work process when interacting decision-makers had similar national cultures.
- For example, it could not differentiate between US and UK decision-makers.

The solution was to enhance the organizational component:

- A decision-maker also brings his organizational culture to his role in the work process.
- This organizational culture can be represented by improved parameters in the Integrative Decision Space Model.

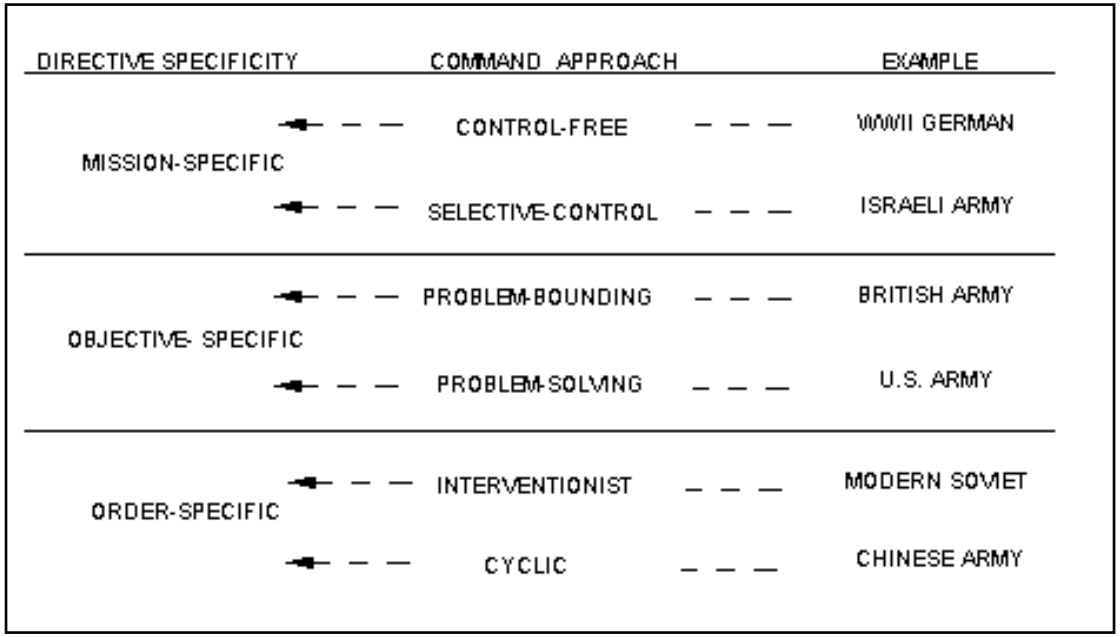
Organizational Culture Parameters

In order to more fully represent the organizational impact on work processes, five organizational culture parameters were identified.

The decision space algorithm compares the organizational culture of the decision-makers at adjacent nodes in the work process when considering these variables:

- Interface Culture – the congruity between nationality
- Authority Distance – the comparison between hierarchical position
- Doctrine – similarity between the organization's guiding principles
- Command Authority – same or different Combatant Command
- Hierarchical Arrangements – similarity between command structures

Example: Hierarchical Arrangement



"The key distinction is the level of centralization required, ranging from the heavily distributed 'control-free' to the inherently centralized 'cyclic' approaches."

Each command approach can also be categorized as *Low*, *Moderate* or *High* with respect to *Detail of Updates* and *Frequency of Updates*.

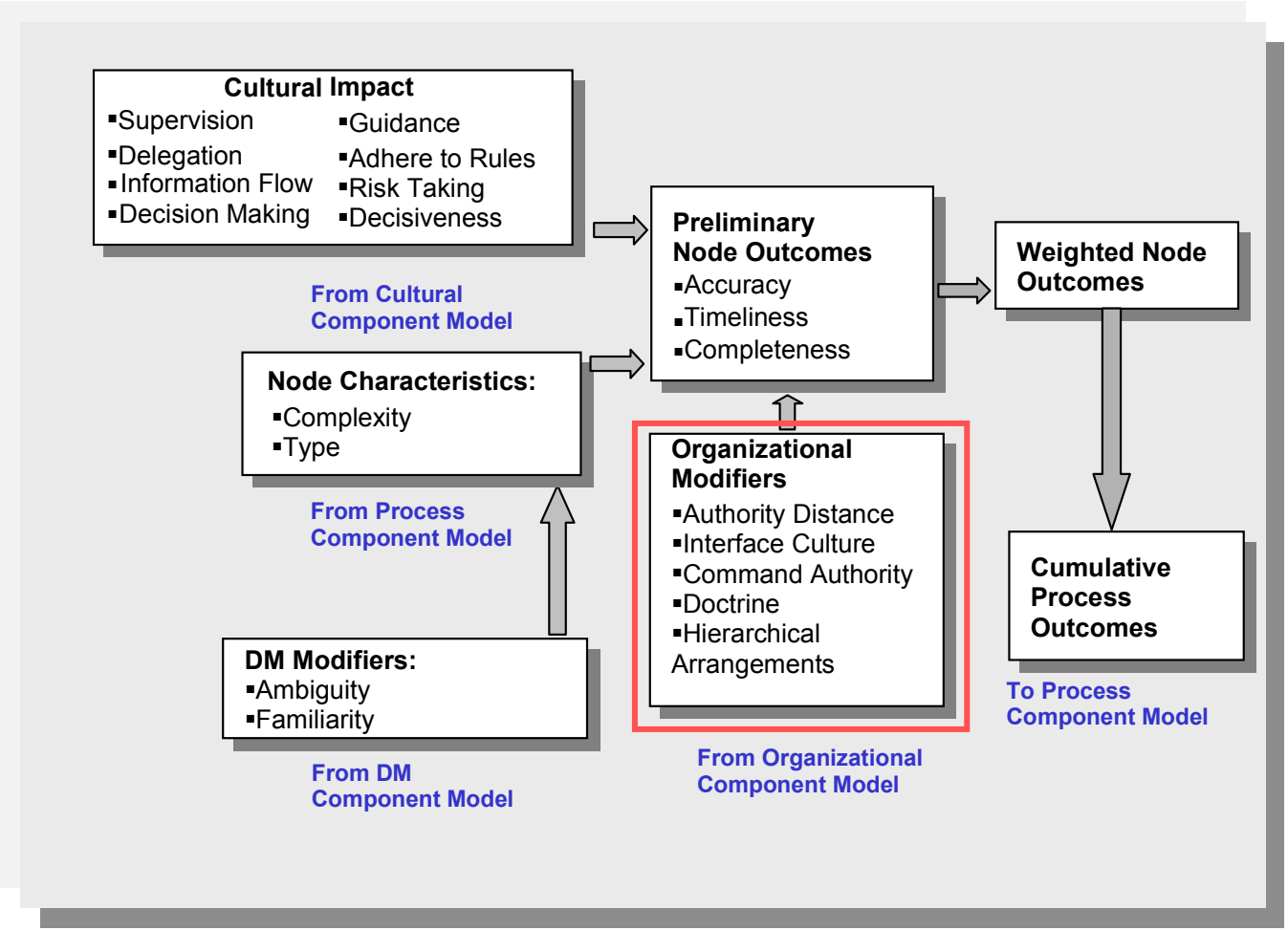
Impact on Outcomes:

- **Accuracy – increases with greater frequency of updates**
- **Completeness – increases with greater detail of updates**
- **Timeliness – increases with lower centralization**

From Alberts & Hayes (1995) Command Arrangements for Peace operations, Washington, DC: NDU Press.

Including Organizational Culture Parameters in the Decision Space Algorithm

The organizational culture parameters exert their impacts directly on outcome criteria in the decision space.



Simulation Example – PAO Process

The effect of including these parameters can be illustrated using a Public Affairs Office process that integrates US and UK decision-makers.

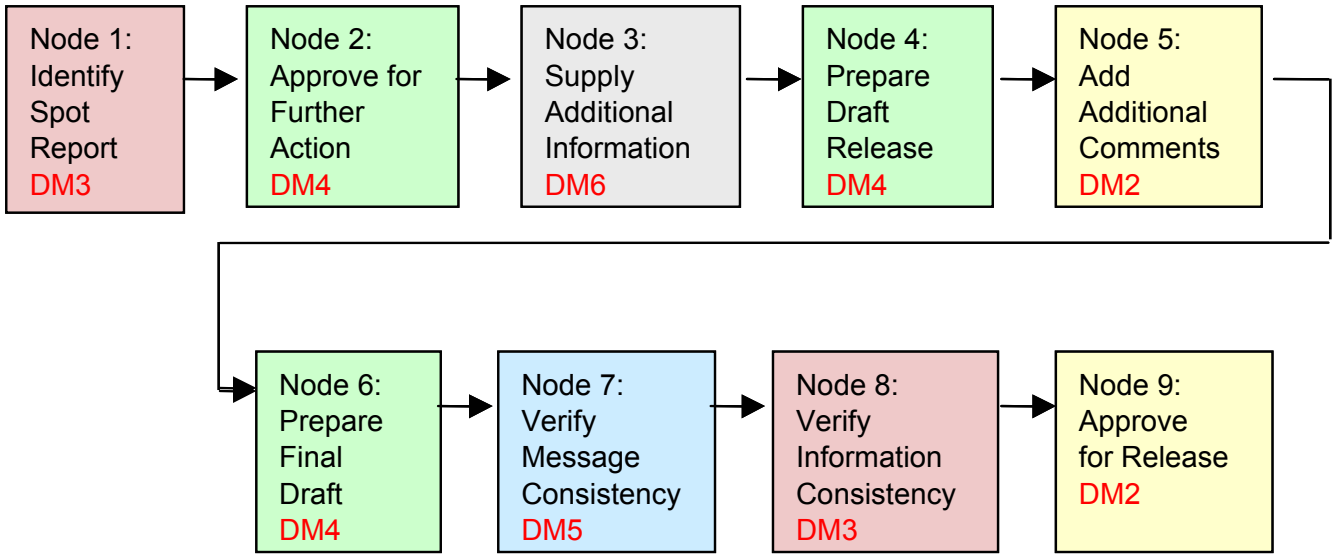
- The US believes that it is a democratic requirement to release information because people have a right to know.
- The UK believes that the release of information should serve an operational purpose and the the media doesn't have the right of access to information.

This results in different doctrine "release thresholds".

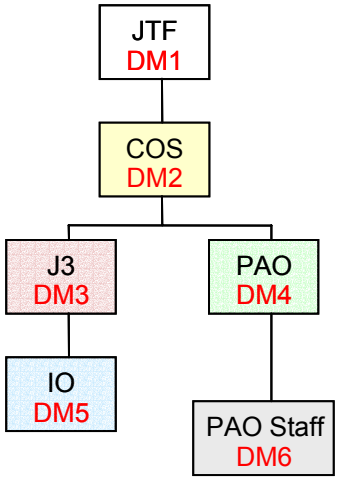
- The US-based policy is to release information unless precluded by troop safety.
- The UK-based policy is to not release information about ongoing or upcoming operations.

Siegel (1998) Target Bosnia: Information Activities in Peace Operations. NATO-Led Operations in Bosnia-Herzegovina, Washington DC: NDU Press.

Public Affairs Office Process



'Reporting to' Structure



Personnel Titles

JTF – Joint Task Force Cdr
COS – Chief of Staff
J3 – Current Operations
PAO – Public Affairs Officer
IO – Information Officer
PAO Staff

Wentz (2002) Lessons from Kosovo, Washington, DC: CCRP Publications Series.

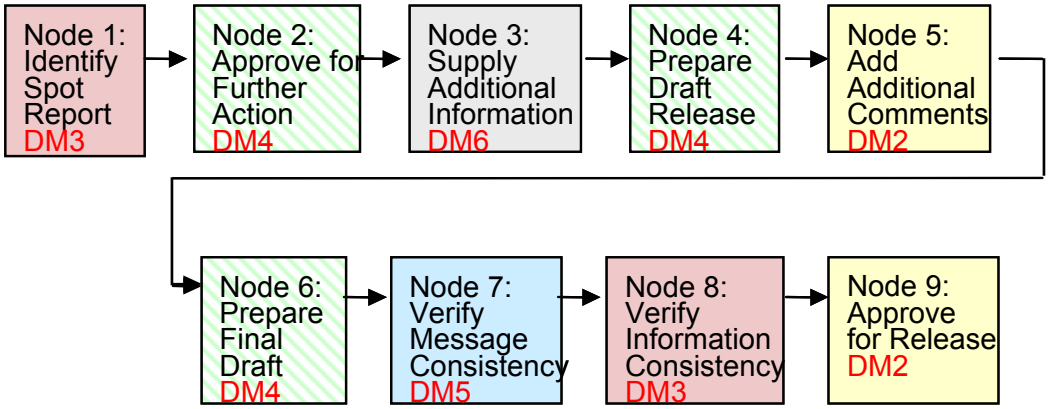
PAO Process Simulation

The Baseline – "All US" process simulation results:

	Node 1	Node 2	Node 3	Node 4	Node 5	Node 6	Node 7	Node 8	Node 9	Sum*
Accuracy	2	0	3	1	2	0	1	1	0	10
Completeness	4	2	5	3	4	2	3	3	2	28
Timeliness	7	6	6	5	7	6	5	5	5	52

*The number values have no inherent meaning--they are simply metrics used to calculate and compare impacts on the process performance outcomes. Each node has an initial value of zero for each outcome; this value is incremented or decremented through the course of the algorithm -- typical values for node outcomes range from –10 to +10.

What affect occurs if a UK PAO with same levels of Training & Experience is assigned to the process? (DM4 --Nodes 2, 4 & 6)



No Differentiation based on US – UK Hofstede Dimensions

Without the enhanced organizational culture parameters:

- The Integrative Decision Space Model would not indicate a difference, since the cultural component model parameters between the US and UK are similar.

	PD	UA	M	I
US	L (40)	L (46)	H (62)	H (91)
UK	L (35)	L (35)	H (66)	H (89)

PD – Power Distance: relationship between people at different levels of authority

UA – Uncertainty Avoidance: tolerance for ambiguity

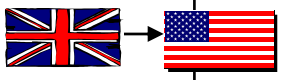
M – Masculinity: expected gender roles

I – Individualism: importance of individual vs. group accomplishments

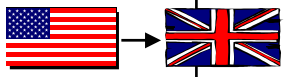
Impact of US-UK Interface

Modifier	Value	Impact
Authority Distance	N/A	Already included in baseline US values.
Interface Culture	Low Difference	Accuracy 0 Completeness 0 Timeliness -1
Command Authority	Same	Accuracy 0 Completeness 0 Timeliness 0
Doctrine	Different	Accuracy 0 Completeness -1 Timeliness 0
Hierarchical Arrangements	Same	Accuracy 0 Completeness 0 Timeliness 0
Overall for nodes with interface D-M from Diff Home Org to D-M from Home Org (UK to US) [2-3, 4-5, 6-7]		0 in Accuracy -1 in Completeness -1 in Timeliness
Overall for nodes with interface D-M from Host Org to D-M from Diff Home Org (US to UK) [1-2, 3-4, 5-6]		0 in Accuracy 0 in Completeness -1 in Timeliness

Summary of possible impacts at each node



- Guided by UK doctrine
- Minor cultural differences



- Minor cultural differences

US-UK Integrated PAO Process Values

With the enhanced organizational culture parameters:

- The organizational cultural parameters present themselves at the interface of the nodes that have decision-makers of different organizations.
- The Integrative Decision Space Model shows a difference, due to differences in organizational culture.

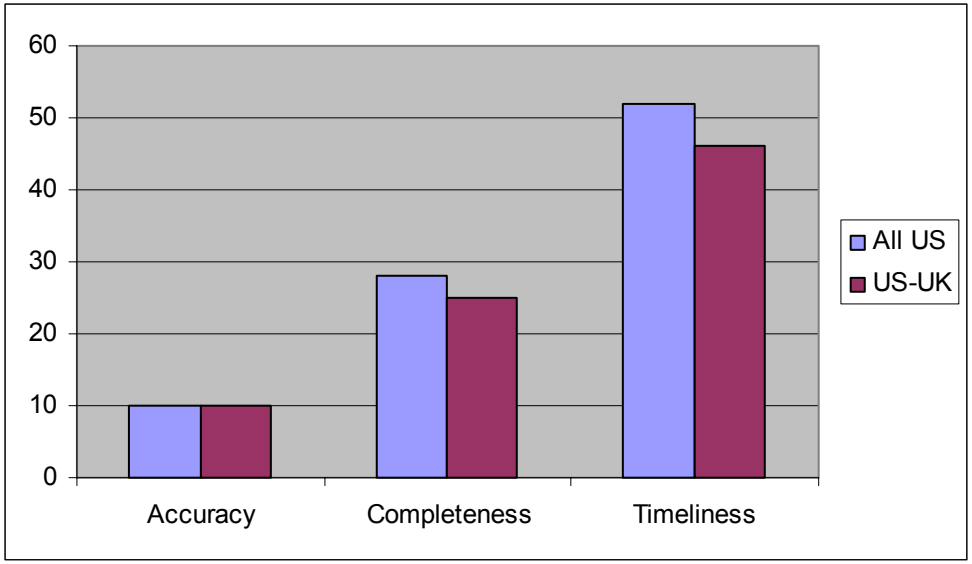
	Node 1	Node 2	Node 3	Node 4	Node 5	Node 6	Node 7	Node 8	Node 9	Sum US-UK	Sum All US
Accuracy	2	0	3	1	2	0	1	1	0	10	10
Completeness	4	1	5	2	4	1	3	3	2	25	28
Timeliness	6	5	5	4	6	5	5	5	5	46	52

Results

A work process that involves staff from multiple nations often results in a decrease in the timeliness measure.

The decrease in completeness reflects the hesitancy of the UK decision maker to release information.

The accuracy was unaffected.



Conclusions

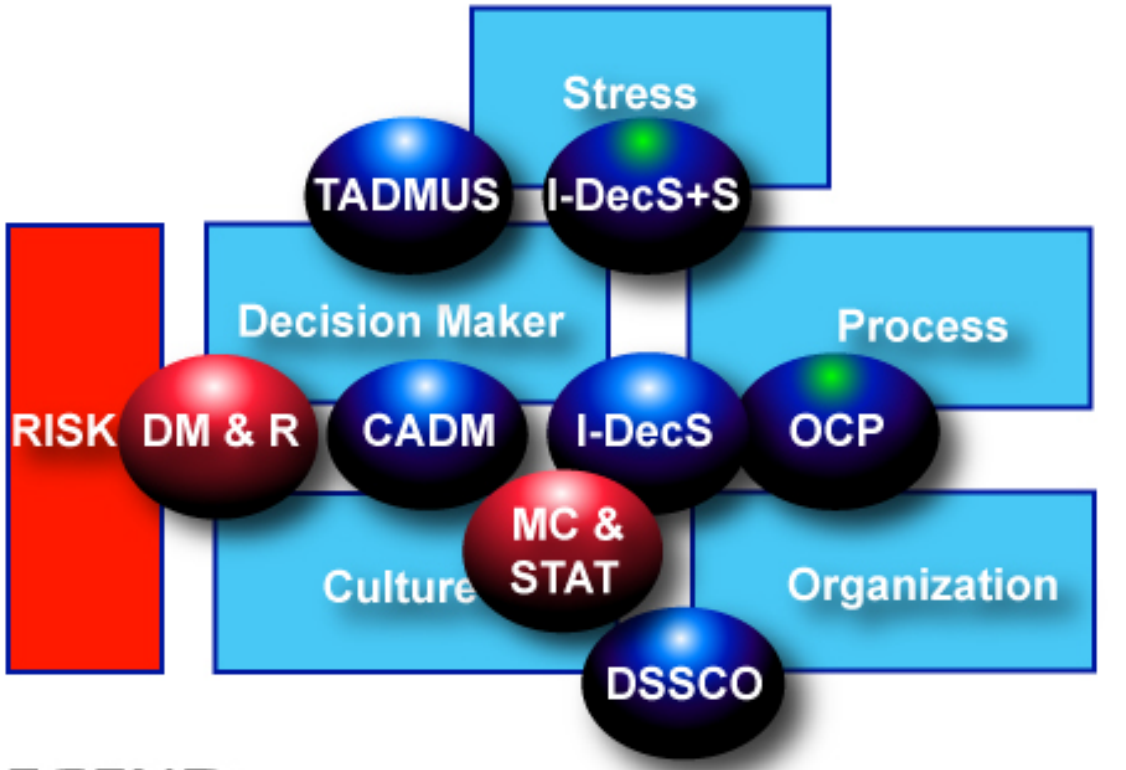
This research identified and included organizational culture parameters in the Integrative Decision Space Model.

This allows the prediction of outcome changes for a work process when interacting decision-makers have similar national cultures but whose organization culture is different.

By identifying organizational culture characteristics, especially in situations where there has not been an opportunity for the decision-makers to train together and learn each other's processes, the potential effects of mismatches in organizational characteristics can be highlighted.

Research Framework

Modeling and Simulation of Multi-faceted Decision-making



LEGEND

- Completed
- In Process
- Proposed

TADMUS: Tactical Decision-Making Under Stress
CADM: Cognitive Aspects of Decision-Making
DSSCO: Decision Support System for Coalition Operations
OCP: Organizational Cultural Parameters
I-DecS: Integrative Decision Space
I-DecS+S: Integrative Decision Space with Stress
DM&R: Decision-making with Risk Assessment
MC&STAT: Monte Carlo and Statistical Analysis