

Effects-Based Operations: A Guide for Practitioners

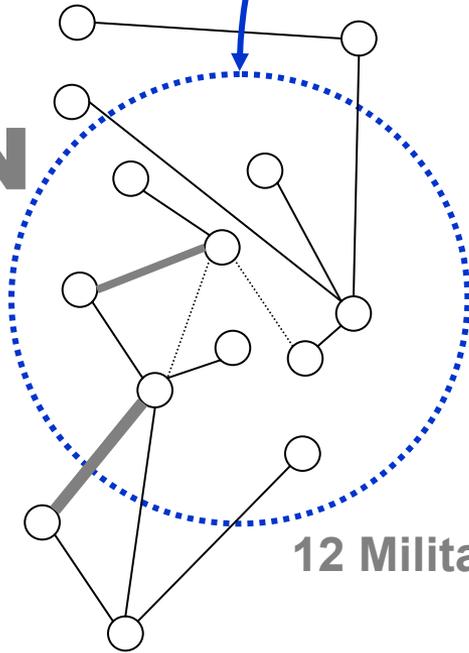
Dr. Guy Duczynski
Jacobs Sverdrup Australia

Contents

- A systems approach:
 - *Problem space*
 - *Solution space*
 - *Design space*
- End-states and the primacy of factors and conditions.
- Knowing “what bad looks like” is not enough...
- we need to contrast that with “what good looks like”.
- Effects as the movers of Conditions.
- Means as the imposers of Effects.
- Capabilities as the enablers for Means
- Fundamental Inputs to Capability (DOTMLPF) as the ingredients of Capabilities.
- Rating Effects-Means pairs to inform decision-making.
- Comments and questions.

The Problem, Solution and Design Spaces

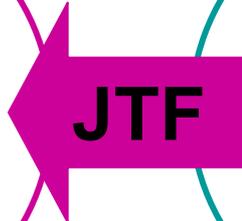
**DA
CSIN
SWI
PNT**



12 Military Strategic Objectives



Strategic and Operational Planning



The Australian Defence Force

18 Military Strategic Effects

103 Military Response Options

Any particular problem space, such as:

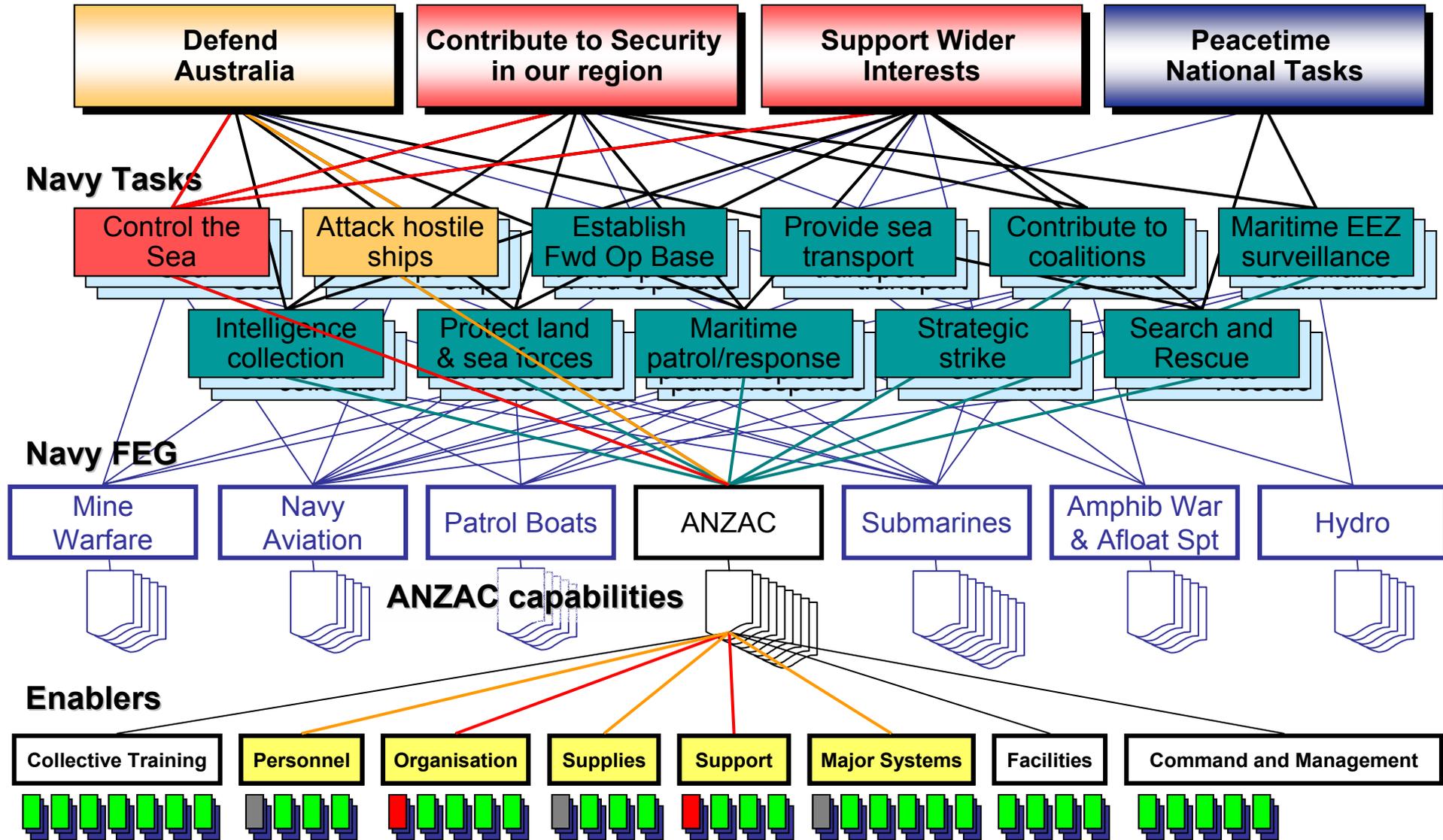
- Soil salinity,
- Illegal immigration, or
- Continuing problems in Iraq

can be attributed to the interactions of many factors.

Rarely is there one single defining ingredient.

A Systems Approach

How might this look in practice?



Definitions for EBO: There are many!

“ the application of military and other capabilities to realise specific, desired operational and strategic outcomes in peace and war. In an Effects–Based Operation, our planning focuses on the effects that we are trying to achieve, which allows us to plan our capabilities and operations more flexibly” .
(FORCE 2020, Australian Defence Force, 2002, p. 22).

“the planning and conduct of operations in such a way as to achieve a desired effect on the target” .
(Australian Defence Doctrine Publication, 3.13 Information Operations, 2002, Glossary, p. 6).

“a process for obtaining a desired strategic outcome or ‘effect’ on the enemy, through the synergistic, multiplicative, and cumulative application of the full range of military and non–military capabilities at the tactical, operational, and strategic levels” .
(Joint Forces Command, Glossary).

“operations conceived and planned in a systems framework that considers the full range of direct, indirect and cascading effects which may – with different degrees of probability – be achieved by the application of military, diplomatic, psychological and economic instruments” .

“effects–based targeting is identifying and engaging an adversary’ s key capabilities in the most efficient manner to produce a specific effect consistent with the commander’ s objectives” .11

(Be “are coordinated sets of actions directed at shaping the behavior of friends, foes and neutrals in peace crisis and war” .
(Smith, 2002, p. xiv).

“the basic premise of effects–based operations [is] focusing on the conditions desired – the effects – to achieve assigned objectives” .
(Mann, Endersby & Searle, n.d.).

Planning and the primacy of ‘*conditions*’ within doctrine

End-state. Will be identified at the national and military strategic levels as follows:

- The national **end-state** is the set of **desired conditions**, incorporating the **elements of national power** that will achieve the national objectives.
- The military strategic **end-state** is the set of **desired conditions** beyond which the use of **military force is no longer required** to achieve national objectives.

RESTRICTED

Chapter 1

which help them to conceptualise how operations stage forms the essence of operational art. The al art, which mirror the tenets of manoeuvre d described in greater detail in ADFP 6):

warfare, are listed below (and

- **Operational objectives.** These are the objectives that need to be achieved in the campaign to reach the military strategic end-state. Correct assessment of operational objectives is crucial to success at the operational level.

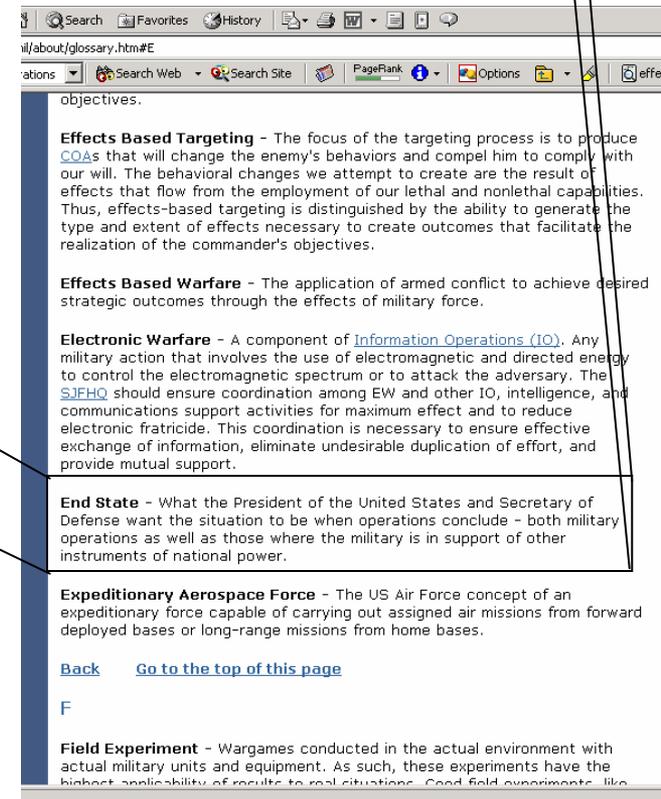
- **End-state.** Will be identified at the national and military strategic levels as follows:
 - The national end-state is the set of desired conditions, incorporating the elements of national power that will achieve the national objectives.
 - The military strategic end-state is the set of desired conditions beyond which the use of military force is no longer required to achieve national objectives.

- **Centre of gravity (COG).** That characteristic, capability or locality from which a military force, nation or alliance derives its freedom of action, strength or will to fight at that level of conflict. The centre of gravity at each level of conflict may consist of a number of key elements. The COG may be physical or psychological. At the operational level it will usually be a combination of both.

(ADDP 5.0.1 Joint Planning, 2002, p. 1-6).

Planning and the primacy of ‘*conditions*’ within doctrine (cont.)

End-state - What the President of the United States and Secretary of Defense **want the situation to be when operations conclude** – both military operations as well as those where the military is in support of other instruments of national power.



(JFCOM website).

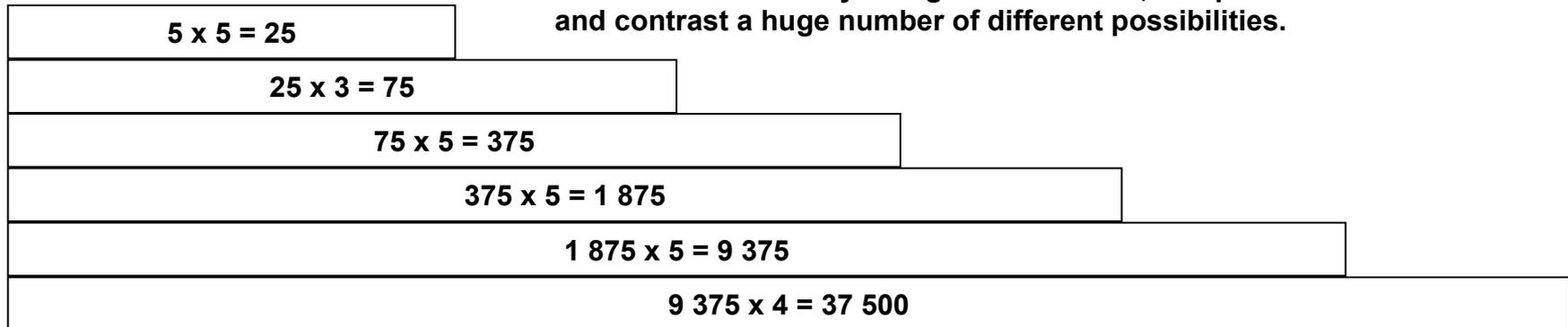
Weather *Conditions*

Temperature (Degrees C)	Wind Speed (Beaufort)	Air Pressure (Hectopascals)	Precipitation (Type)	Cloud Type	Humidity (%)	Cloud Cover
-----------------------------------	---------------------------------	---------------------------------------	--------------------------------	-------------------	------------------------	--------------------

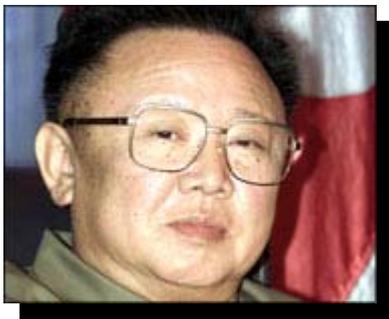
Weather Conditions

Temperature (Degrees C)	Wind Speed (Beaufort)	Air Pressure (Hectopascals)	Precipitation (Type)	Cloud Type	Humidity (%)	Cloud Cover
26° to 50°	Calm	High	None	Cumulo-nimbus	100%	Nil
11° to 25°	Breeze	Medium	Showers	Stratus	75%	Scattered
-9° to 10°	Gale	Low	Sleet	Cirrostratus	50%	Overcast
-10° to -24°	Storm		Snow	Cirrus	25%	8/8
-25° to -50°	Hurricane		Hail	No Clouds	0%	

In what is an infinitely fine-grained context, it is possible to describe and contrast a huge number of different possibilities.



However, the single impossibility of snow falling in a 26-50° temperature range removes 1500 configurations.



Factors and Conditions Array for North Korea



S	U	P	R	E	M
Societal latitudes	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive S ₁	Unified-democratic U ₁	Democratic pluralist and open P ₁	Friendly engaged open dialogue R ₁	Integrated globalised and prosperous E ₁	Defensive, balanced and supportive M ₁
Open prescriptive S ₂	Divided-cooperative U ₂	Benevolent dictatorship/ monarchy P ₂	Unilateralist R ₂	Regionally engaged and robust E ₂	All consuming fixation for modernisation M ₂
Restricted S ₃	Divided-adversarial U ₃	Centrally controlled and closed P ₃	Deceitful and dishonest R ₃	Self sustaining E ₃	Projected and aggressive M ₃
Closed prescriptive S ₄	Unified-Communist U ₄	Non-benevolent dictatorship/ monarchy P ₄	Hostile and adversarial R ₄	Reliant on external providers E ₄	
		Demigod P ₅		Failure ridden and closed system E ₅	



A 4x4x5x4x5x3 matrix produces 4 800 possible configurations. One plausible configuration is displayed above as S₂U₂P₁R₂E₃M₁.

North Korea - Plausible Configurations

S	U	P	R	E	M
Societal latitudes	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive	Unified-democratic	Democratic pluralist and open	Friendly engaged open dialogue	Integrated globalised and prosperous	Defensive, balanced and supportive
S ₁	U ₁	P ₁	R ₁	E ₁	M ₁
Open prescriptive	Divided-cooperative	Benevolent dictatorship/monarchy	Unilateralist	Regionally engaged and robust	All consuming fixation for modernisation
S ₂	U ₂	P ₂	R ₂	E ₂	M ₂
Restricted	Divided-adversarial	Centrally controlled and closed	Deceitful and dishonest	Self sustaining	Projected and aggressive
S ₃	U ₃	P ₃	R ₃	E ₃	M ₃
Closed prescriptive	Unified-Communist	Non-benevolent dictatorship/monarchy	Hostile and adversarial	Reliant on external providers	Failure ridden and closed system
S ₄	U ₄	P ₄	R ₄	E ₄	M ₄
		Demigod			
		P ₅			

S	U	P	R	E	M
Societal latitudes	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive	Unified-democratic	Democratic pluralist and open	Friendly engaged open dialogue	Integrated globalised and prosperous	Defensive, balanced and supportive
Open prescriptive	Divided-cooperative	Benevolent dictatorship/monarchy	Unilateralist	Regionally engaged and robust	All consuming fixation for modernisation
Restricted	Divided-adversarial	Centrally controlled and closed	Deceitful and dishonest	Self sustaining	Projected and aggressive
Closed prescriptive	Unified-Communist	Non-benevolent dictatorship/monarchy	Hostile and adversarial	Reliant on external providers	Failure ridden and closed system

The prevailing conditions as determined by US military planners at the JIOC in 2002

North Korea as a Problem Space

End-States:

“If this is *bad*, show me what *good* looks like, because that (end-state) is what all our actions are in pursuit of”.

S	U	P	R	E	M
Societal latitudes	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive S ₁	Unified-democratic U ₁	Democratic pluralist and open P ₁	Friendly engaged open dialogue R ₁	Integrated globalised and prosperous E ₁	Defensive, balanced and supportive M ₁
Open prescriptive S ₂	Divided-cooperative U ₂	Benevolent dictatorship/monarchy P ₂	Unilateralist R ₂	Regionally engaged and robust E ₂	All consuming fixation for modernisation M ₂
Restricted S ₃	Divided-adversarial U ₃	Centrally controlled and closed P ₃	Deceitful and dishonest R ₃	Self sustaining E ₃	Projected and aggressive M ₃
Closed prescriptive S ₄	Unified-Communist U ₄	Non-benevolent dictatorship/monarchy P ₄	Hostile and adversarial R ₄	Reliant on external providers E ₄	
		Demigod P ₅		Failure ridden and closed system E ₅	

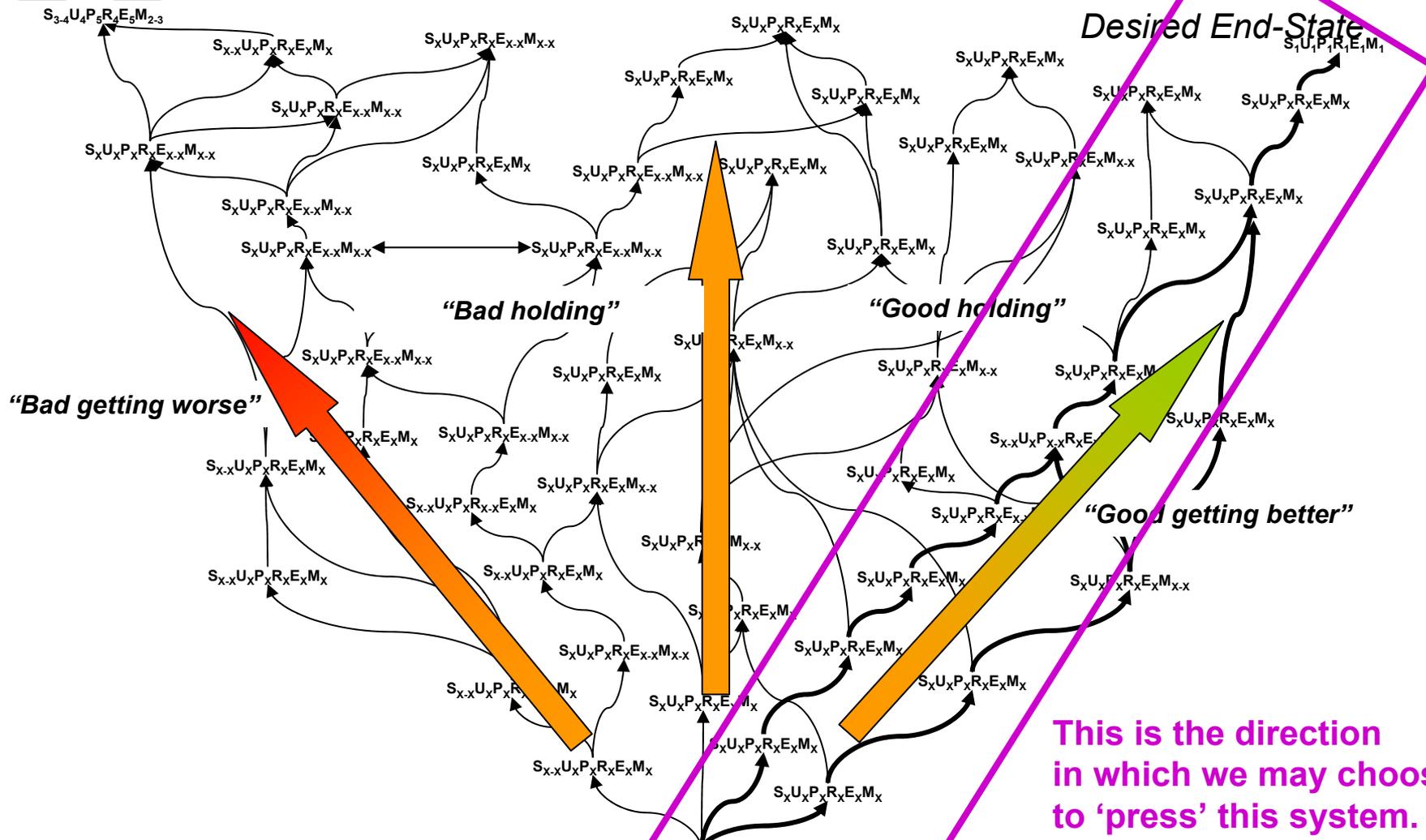
S	U	P	R	E	M
Secular tolerance	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive	Unified-democratic	Democratic pluralist and open	Freely engaged open dialogue	Integrated globalized and progressive	Defensive, balanced and supportive
Open prescriptive	Socially cooperative	Behavioral relationship reciprocity	Utilitarian	Regularly engaged and robust	All containing: - Reason for modernization
Restricted	Divided-adversarial	Centrally controlled and closed	Useful and dishonest	Self-sustaining	Propagated and aggressive
Closed prescriptive	Unified-Communist	Non-behavioral authoritarianism by	Hostile and adversarial	Reliant on external providers	Failure ridden and closed system
		Demanded			

Feared End-State

More of the same

Desired End-State

S	U	P	R	E	M
Secular tolerance	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive	Unified-democratic	Democratic pluralist and open	Freely engaged open dialogue	Integrated globalized and progressive	Defensive, balanced and supportive
Open prescriptive	Socially cooperative	Behavioral relationship reciprocity	Utilitarian	Regularly engaged and robust	All containing: - Reason for modernization
Restricted	Divided-adversarial	Centrally controlled and closed	Useful and dishonest	Self-sustaining	Propagated and aggressive
Closed prescriptive	Unified-Communist	Non-behavioral authoritarianism by	Hostile and adversarial	Reliant on external providers	Failure ridden and closed system
		Demanded			



This is the direction in which we may choose to 'press' this system.

S	U	P	R	E	M
Secular tolerance	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive	Unified-democratic	Democratic pluralist and open	Freely engaged open dialogue	Integrated globalized and progressive	Defensive, balanced and supportive
Open prescriptive	Socially cooperative	Behavioral relationship reciprocity	Utilitarian	Regularly engaged and robust	All containing: - Reason for modernization
Restricted	Divided-adversarial	Centrally controlled and closed	Useful and dishonest	Self-sustaining	Propagated and aggressive
Closed prescriptive	Unified-Communist	Non-behavioral authoritarianism by	Hostile and adversarial	Reliant on external providers	Failure ridden and closed system
		Demanded			

The Present

Confirmation that this approach has merit

“UNDERSTANDING THE NORTH KOREAN SYSTEM”

- The Democratic People’s Republic of Korea (DPRK) is the world’s most *self-referential political system*.
- The North continues to adhere to a *national mythology* reinforced by a dynastic succession from father (Kim Il Sung) to son (Kim Jong Il).
- It is the world’s *sole surviving Stalinist state*, with an undiminished cult of personality surrounding Kim Jong Il.
- North Korea is also the world’s *most militarized regime*.
- North Korea is also *a society experiencing acute internal privation*.
- The North’s *dysfunctional economic policies* led to a *horrific famine* and *humanitarian crisis* during the mid-1990s.

Source: Pollock, J. (2003) The United States, North Korea and the End of the Agreed Framework, *Naval War College Review*, Summer 2003, p. 15-16

Imposing *effects* to reset the *conditions*

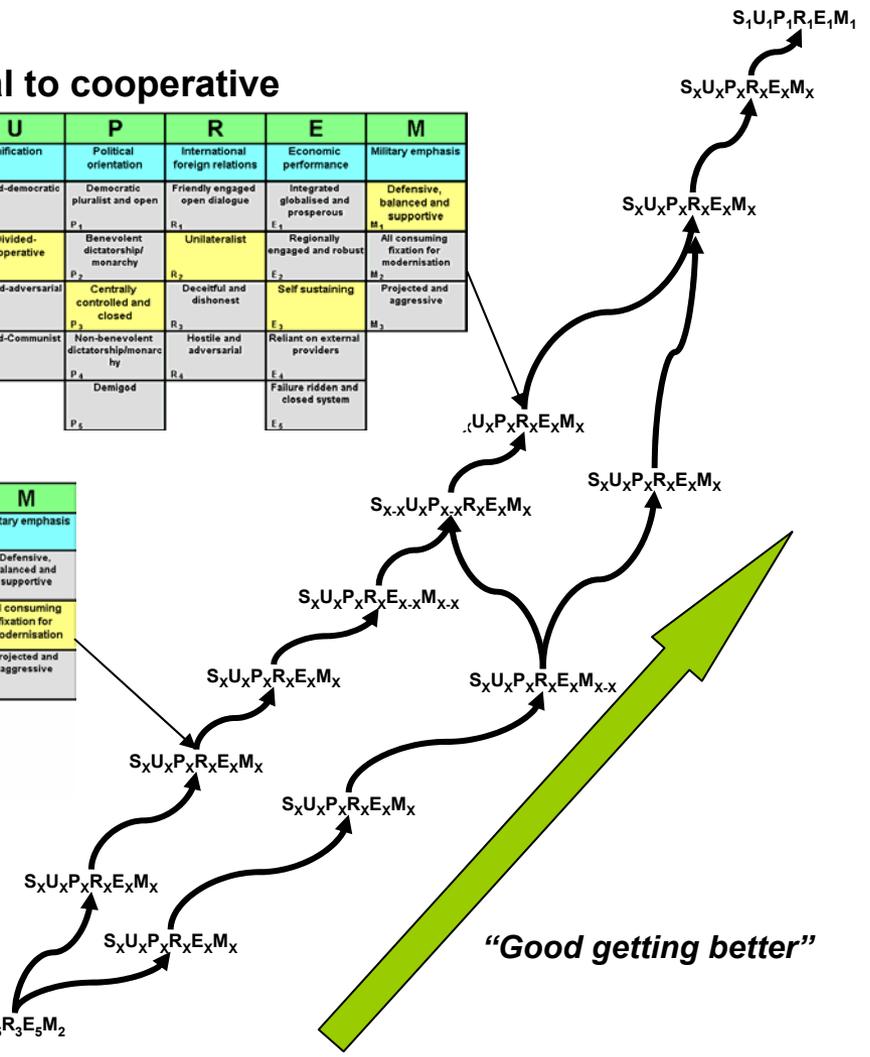
- Societal latitudes broadening
- Unification condition change from adversarial to cooperative
- Political orientation moderating
- Relations with neighbors improving
- Economic performance lifted
- Military fixation diminished

This successful application of EBO can be characterised by:

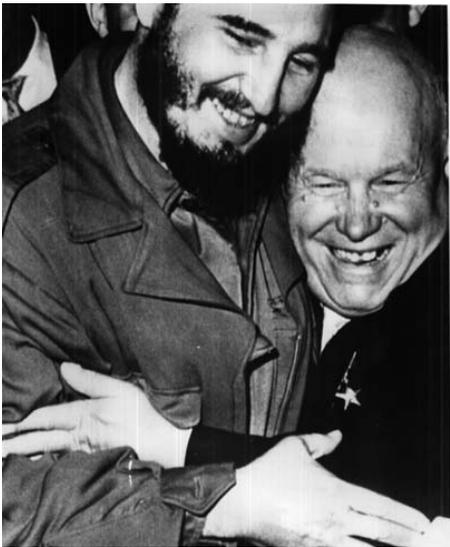
S	U	P	R	E	M
Societal latitudes	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive	Unified-democratic	Democratic pluralist and open	Friendly engaged open dialogue	Integrated globalised and prosperous	Defensive, balanced and supportive
S ₁	U ₁	P ₁	R ₁	E ₁	M ₁
Open prescriptive	Divided-cooperative	Benevolent dictatorship/monarchy	Unilateralist	Regionally engaged and robust	All consuming fixation for modernisation
S ₂	U ₂	P ₂	R ₂	E ₂	M ₂
Restricted	Divided-adversarial	Centrally controlled and closed	Deceitful and dishonest	Self sustaining	Projected and aggressive
S ₃	U ₃	P ₃	R ₃	E ₃	M ₃
Closed prescriptive	Unified-Communist	Non-benevolent dictatorship/monarchy	Hostile and adversarial	Reliant on external providers	Failure ridden and closed system
S ₄	U ₄	P ₄	R ₄	E ₄	M ₄
		Demigod			

S	U	P	R	E	M
Societal latitudes	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive	Unified-democratic	Democratic pluralist and open	Friendly engaged open dialogue	Integrated globalised and prosperous	Defensive, balanced and supportive
S ₁	U ₁	P ₁	R ₁	E ₁	M ₁
Open prescriptive	Divided-cooperative	Benevolent dictatorship/monarchy	Unilateralist	Regionally engaged and robust	All consuming fixation for modernisation
S ₂	U ₂	P ₂	R ₂	E ₂	M ₂
Restricted	Divided-adversarial	Centrally controlled and closed	Deceitful and dishonest	Self sustaining	Projected and aggressive
S ₃	U ₃	P ₃	R ₃	E ₃	M ₃
Closed prescriptive	Unified-Communist	Non-benevolent dictatorship/monarchy	Hostile and adversarial	Reliant on external providers	Failure ridden and closed system
S ₄	U ₄	P ₄	R ₄	E ₄	M ₄
		Demigod			

S	U	P	R	E	M
Societal latitudes	Unification	Political orientation	International foreign relations	Economic performance	Military emphasis
Open permissive	Unified-democratic	Democratic pluralist and open	Friendly engaged open dialogue	Integrated globalised and prosperous	Defensive, balanced and supportive
S ₁	U ₁	P ₁	R ₁	E ₁	M ₁
Open prescriptive	Divided-cooperative	Benevolent dictatorship/monarchy	Unilateralist	Regionally engaged and robust	All consuming fixation for modernisation
S ₂	U ₂	P ₂	R ₂	E ₂	M ₂
Restricted	Divided-adversarial	Centrally controlled and closed	Deceitful and dishonest	Self sustaining	Projected and aggressive
S ₃	U ₃	P ₃	R ₃	E ₃	M ₃
Closed prescriptive	Unified-Communist	Non-benevolent dictatorship/monarchy	Hostile and adversarial	Reliant on external providers	Failure ridden and closed system
S ₄	U ₄	P ₄	R ₄	E ₄	M ₄
		Demigod			



EBO is not new, an example from 1962



One Effect (of enormous consequence if unsuccessful) was chosen for the Cuban Missile Crisis:

Missiles are removed immediately!

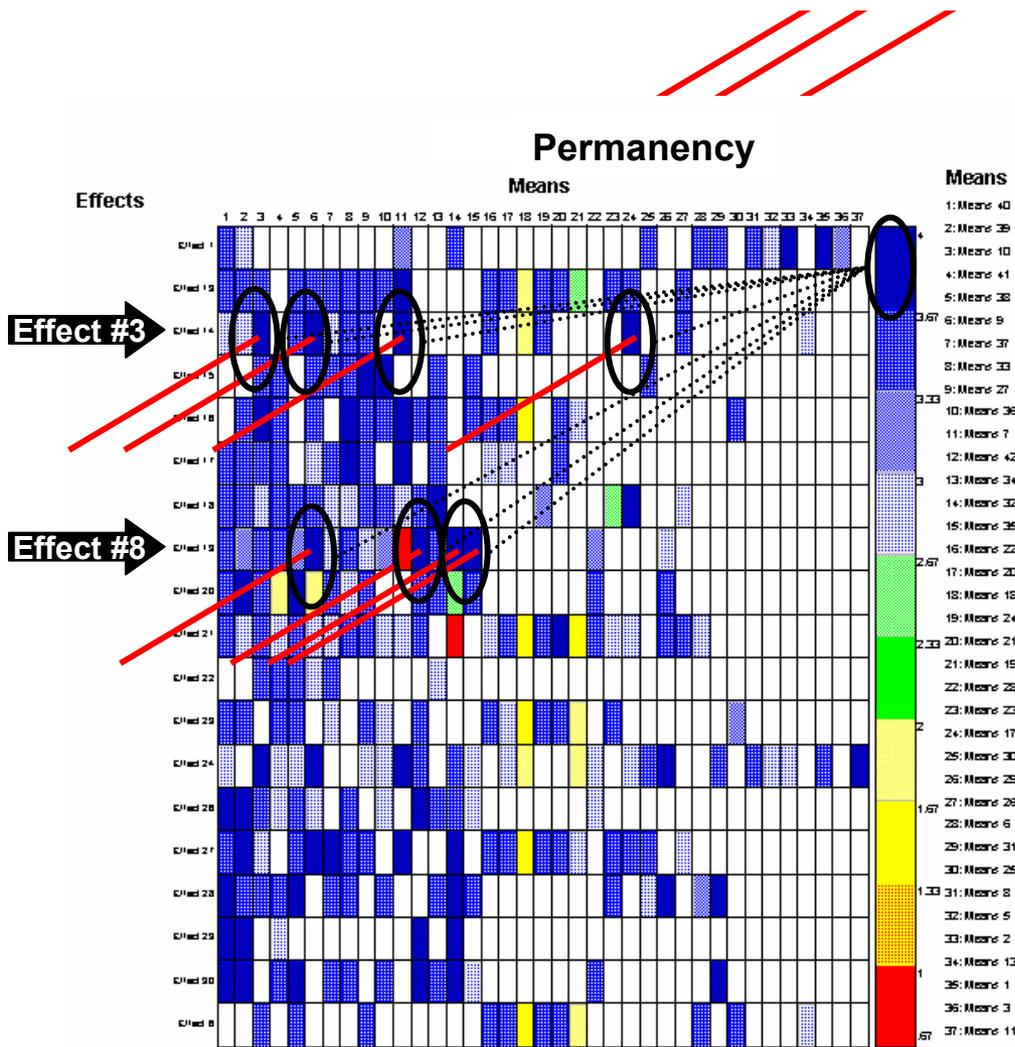
Six candidate Means presented themselves:

- 1. Do nothing**
- 2. Diplomatic approach to Castro**
- 3. Diplomatic pressures**
- 4. Invasion**
- 5. Air strike**
- 6. Naval blockade**

Each of these was tested against six 2nd order effects:

- 1. World power balance remains in favor of US**
- 2. US hemispheric defences are preserved**
- 3. World opinion remains favorable towards US**
- 4. Sentiment of US public opinion remains favorable towards administration**
- 5. Sino-Soviet relationship is not strengthened**
- 6. US relationship with Soviet Union is not worsened**

Effects-Means pairs



By selecting *effects* which are appropriate for the problem, planners are now able to 'project' a line through the linked pairs; in this case accommodating the requirement for a permanent solution.

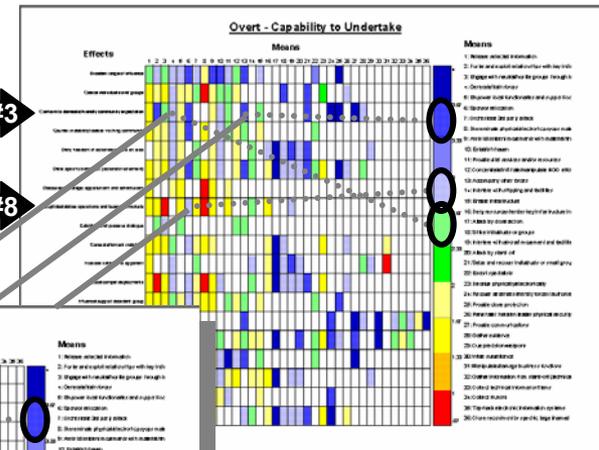
Revealing the best package of *means* and *effects* for this single situation and requirement for 'permanency'.

A Search for Alternatives

- *Political exposure*
- *Totality of effect*
- *Immediacy of effect*
- *Capability to undertake*

Effect #3

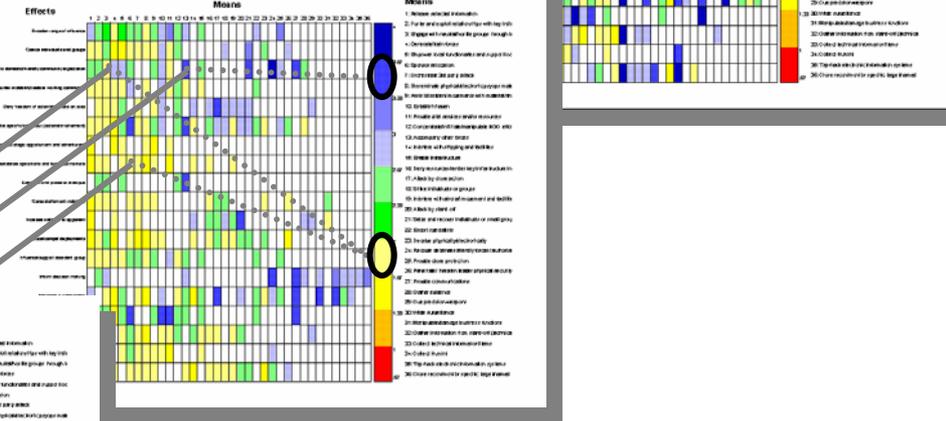
Effect #8



Effect #3

Effect #8

Overt - Immediacy of Effect



Effect #3

Effect #8

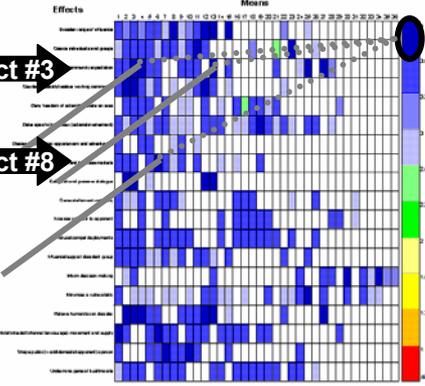
Overt - Totality of Effect



Overt - Political Exposure

Effect #3

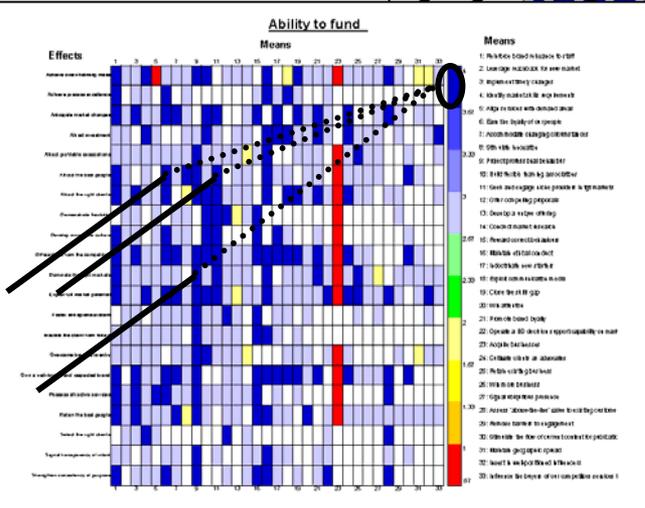
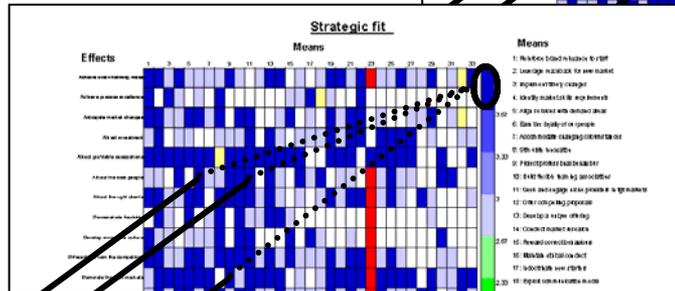
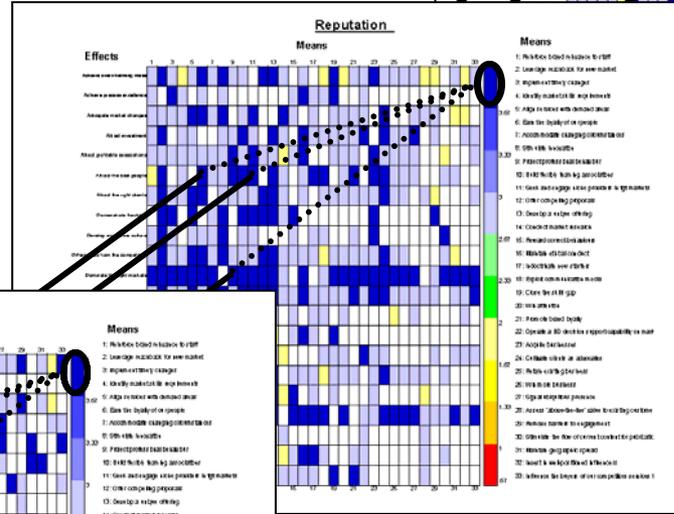
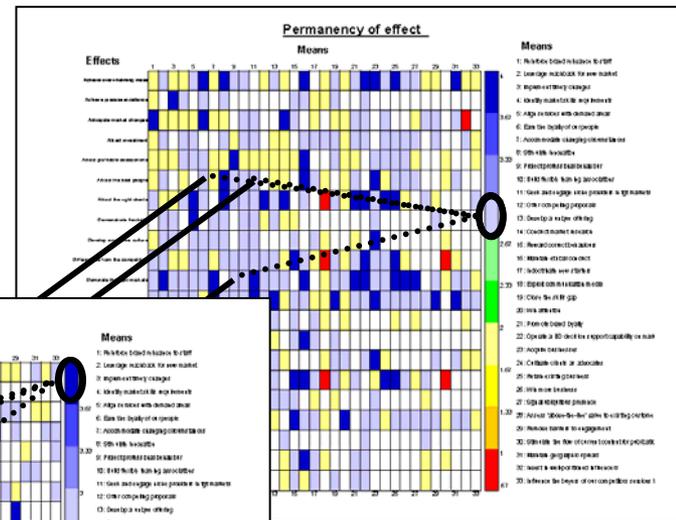
Effect #8



The aim is to build a multi-dimensional picture of 'fitness for purpose' that reveals the best combination of paired effects-means.

Other Criteria:

- Ability to fund
- Strategic fit
- Reputation
- Cultural specificity



Develop a unique offering
Develop a unique offering
Develop a unique offering
Develop a unique offering
Develop a unique offering

Exploit full market potential
Foster entrepreneurialism
Insulate the client from failure
Overcome barriers to entry
Own a well-known and respected brand

Strategic fit:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Totality of effect:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Immediacy of effect:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Capability to undertake:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Ability to fund:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Reputation:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?

ABILITY TO FUND

- 1 = Unlikely - Requires additional funding.
- 2 = Difficult - extensive reallocation of resources likely.
- 3 = Achievable - manageable reallocation of resources.
- 4 = Easy - within existing resource allocation.

Questions