



NATO QRT on Non-Lethal Capabilities Background/Charter



- NAAG Workshop on NonLethal Weapons (NLW) formed QRT - (Sep 06)
- Allied Command Transformation (ACT) broadened scope of QRT to NonLethal Capabilities (NLC) - (Dec 06)
- QRT Charter:
 - Analyze and review existing information
 - Establish NLW catalogue
 - Provide recommendations to address shortfalls
 - Provide recommendations for standardization
 - Provide proposals for other NATO group activities



QRT Methodology



- The QRT looked into the following main areas:
 - Why is a NLC required in NATO?
 - What is required to develop an NLC in NATO?
 - What are the NATO NLC shortfalls?
- Output was categorized as follows:
 - Policy: Policy, definitions, legal, ethical, presentational,
 National Caveats, etc.
 - <u>Capability:</u> Existing capability, capability requirements, shortfalls, opportunities for standardization, wider considerations, etc.
- There is a clear requirement for further work!



Policy Review



- There is a requirement for a policy review, to include:
 - Add a definition of NLC to existing policy
 - Conduct a legal review
 - Examine wider considerations, such as: ethical, presentational, Rules of Engagement, National Caveats, etc.
- Recommendation: To form a specific group, at the appropriate level within NATO, to conduct a policy review.

QRT Proposed NLC Definitions QRT NL Capabilities Overview



Capability Review



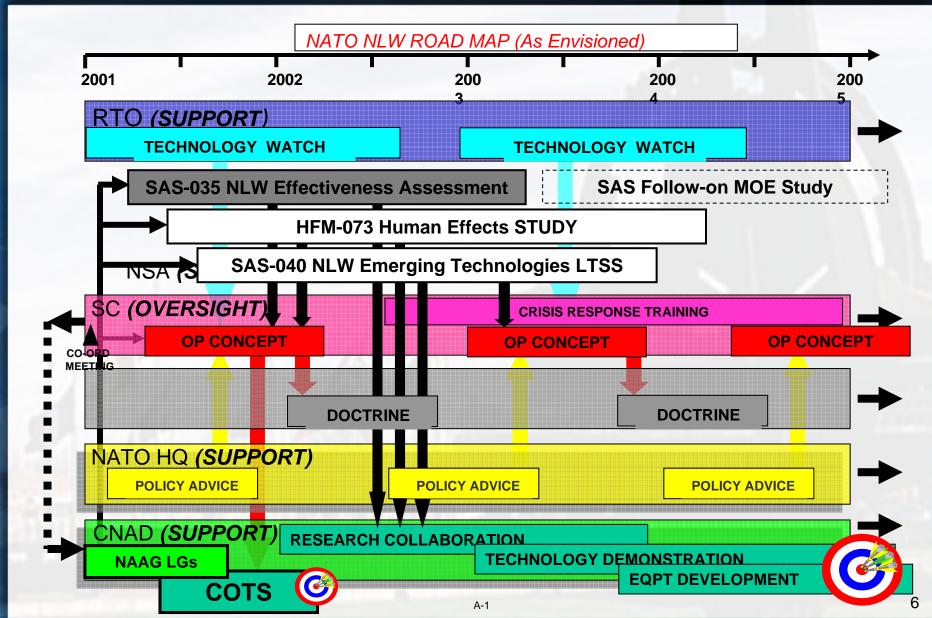
- There is a requirement for a joint capability review, to include:
 - Creation of an NLW catalogue.
 - Develop an NLC database
 - Identification of NLC shortfalls.
 - To examine capability across all lines of development (doctrine, training, personnel, etc.)
 - Opportunities for standardization.
- Recommendation: To form a specific joint group, at the appropriate level within NATO, to conduct a capability review.

NLC Catalogue
Shortfall Matrix



Execution Roadmap







Summary of Recommendations



- Request a Non-Lethal policy amendment.
- Form NATO groups to conduct.
 - Legal review
 - Capability review
- Empower a dedicated and joint NATO group with responsibility for NLC.
- Endorse a road map for implementation.



Questions?



Backups



QRT NLC Definitions



- The following definitions are offered for consideration by the Policy Review Group:
- Definition of NLC (1) QRT definition:

A capability, designed and expected to achieve a relevant military effect on a person, equipment or infrastructure yet with a significantly lower risk of human fatality or permanent injury than could be expected from conducting the same task through the use of conventional systems (i.e. those designed with a high probability of lethality).

Definition of NLC (2) – SAS-035 definition:

Procedures, systems and equipment with a low risk of causing fatalities and permanent injury to personnel and undesired damage to property and the environment for use across the full range of operations; they augment the use or threat of the use of lethal force and provide commanders with wider options of delivering Fighting Power to achieve strategic, operational and tactical objectives.



NATO NL Capabilities Overview (Categories, SAS-35)



Electro- magnetic	Chemical	Acoustic	Mechanical/ Kinetic	Ancillary
ELECTRICALS Pulsed Current Direct Current RADIO FREQUENCY EMP Wide/Ultra Wide Band MICROWAVE High Power Microwave MILLIMETER WAVE INFRARED Lasers (COIL) CO2 HF/DF Solid State VISIBLE Lasers Lights ULTRAVIOLET Lasers X-RAY	OBSCURANTS Rapid Hardening Agents Smokes REACTANTS MALODORANTS RIOT CONTROL ANTI-TRACTION -Lubricants -Surfactants FOAMS THERMOBARRIC NANOPARTICLES	AUDIBLE (20Hz-20kHz) AUDIBLE/OPTICAL Flash Bangs ULTRASOUND (> 20KHz)	BARRIERS ENTANGLEMENTS Nets CLOGGERS BLUNT IMPACT DEVICES Projectiles Velocity Adjusting Water Stream	MARKERS Dyes Fluorescent Paints Taggers NON-LETHAL CASINGS Frangible Casings Combustible Casings ENCAPSULANTS Micro-encapsulation

^{*} These are possible technology types. Specific systems must comply with treaty and legal obligations.



QRT NLC Shortfall Matrix (Example)



				NLW Category >		ELECT	MECHANICAL and KINE						
			·	Catalogue Entry	NLC SUMMARY	SUMMARY ELECTROMAGNETIC	Catalogue entries	KINETIC SUMMARY	Polymeric Impact Round (UK)	L65/ L5A7 polymeric Impact Round	blah	Hickory Sticks	Caltrops / Lazy Tongs / X net etc
Core Capability	Functional Area	Mission Task	More detail needed ?		х								
СР	CROWD CONTROL (CC)	CC SUMMARY			х								
		CC1 etc x 20			х								
СМ	Vehicles (DV)	DV Summary					х		х	x	х	x	х
		DV1 - Stop Veh urban	DV1a - 0-50m										
		DV2 - Stop veh rural	DV1b - 50+m		X			х					
		DV3			Y			Y					
		upto DV 15			X			x					
	Disable/Neutralize Vehicles, Vessels, Aircraft &							X					
cc	Disable/Neutralize Facilities and Systems							х					
	Deny Use of WMD							х					



QRT NLC Catalogue (Example)



Ref#	Category	Capability	Description	Range (m)	Recommended Use	Country of Use	Mission	Producer	Model	Remarks
Ref # will	Acoustic,	Counterpersonnel	What does system do?	, , ,	(CRC – Detainee			If relevant.		
be added	Chemical,	(CP),	To who/what?		handling etc)					
when	Electromagnetic,	Countermaterial								
Dbase is	Mechanical and	(CM),								
complete.	Kinetic,	Countercapability								
	Ancilliary	(CC)								
1	Mechanical,	CM	Stinger Strips	NA	Stop Vehicles by	USA				One time use
	Kinetic				deflating tires.					
2	Mechanical,	CM	Portable Vehicle	NA	Stop Vehicles. Net is	USA				Size: 1.2m L x 1.1m W x 1.1m H.
	Kinetic		Arresting Barrier		deployed to trap vehicle.					Weight: 275 kgs. Bi-directional,
			(PVAB)		Stops a 3400 kg vehicle					covers single lane.
		211						01 110 1111		
3	Mechanical,	CM	Vehicle Lightweight	NA	Stop Vehicles. Spikes	USA		QinetiQ, UK		Current system is man-packable and
	Kinetic		Arresting Device (VLAD		puncture tires and net					manually deployed. Self deploying
			or XNET)		wraps around vehicle					system is under development. Uni-
					front axle, bringing vehicle to a controlled					directional, covers single lane.
					halt. Stops a 3628 kg					
					vehicle traveling 95 kph.					
4	Chemical	CP	Hand Grenades with		Crowd and riot control.	France				Kosovo, Ivory Coast, Afghanistan
	onomica.	o.	smoke generator - tear		Force protection (sites	1 101100				Troopie, mery Codet, migria motari
			gas		and equipment).					
			3		Always combine with					
					lethal weapons					
					(reversibility) as well as					
					with passove defence					
					assets (prevention,					
					deterrence.)					
5	Chemical,	CP	"Cougar" 56mm grenade	50, 100,	Crowd and riot control.	France				Kosovo, Ivory Coast, Afghanistan
	Acoustic		launcher. Use against	200	Force protection (sites					
			crowd with smoke		and equipment).					
			generator-tear gas and		Always combine with					
			deafening device.		lethal weapons					
					(reversibility) as well as					
					with passove defence					
					assets (prevention,					
- 6	Machaniaal	СР	"DDD" hand arounded		deterrence.) Crowd and riot control.	Гиопос				Kasara hari Casat Afahaniatan
6	Mechanical, Kinetic	CP	"DBD" hand-grenades. Projection of rubber		Force protection (sites	France				Kosovo, Ivory Coast, Afghanistan
	Killetic		splinters.		and equipment).					
			opinitors.		Always combine with					
					lethal weapons					
					(reversibility) as well as					
					with passove defence					
					assets (prevention,					
					deterrence.)					
7	Optical,	CP	40 mm, 4 x BANG M/03		Distract	Denmark			MAT #:	
	Acoustic		(Sound and flash)		crowd/individuals by 4 x				1310226084108, or	
				60-90 m	bang (150 db)			NICO	1370123658962	KFOR, OIF, ISAF RC-S
8	Mechanical,	CP	40 mm M/03 Rubber		Distract, incapacitate	Denmark				
	kinetic		Buck Shot	40 m	crowd/individuals			NICO	MAT #: 13102261098	KFOR, OIF, ISAF RC-S