WiMAX for War Fighters

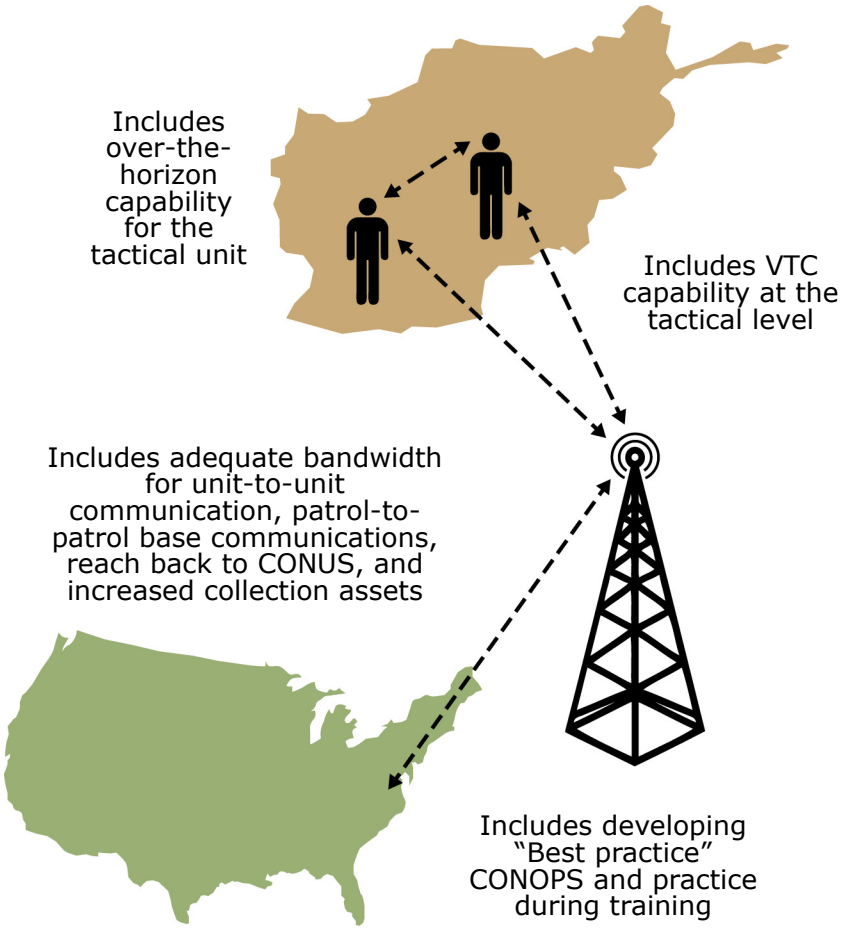
Expand bandwidth speed and coverage at the tactical level to exponentially improve information sharing across areas of operation

Upgrade the current communications architecture with bandwidth and connectivity that transforms AtN information-sharing across the battle space.

C-IED forces need the ability to quickly receive and transmit information about the human terrain and patterns of life in real-time in order to collect and act upon that information. Their current communication architecture is, at best, a patchwork of systems. Currently no end-to-end system has been released to enable information transfer across tactical areas of operation in Afghanistan. As a result, C-IED forces are unable to collect, analyze or share information optimally, which slows them down and prevents them from making connections that would identify the enemy.

'Mobile WiMAX' Communications Capability

This capability would provide mobile high speed broadband internet access, VoIP, and IPTV services to battalion and brigade-level assets on the ground



"If you could do this [overhaul communications], this is a thunderclap." – USMC Brigade Operations Officer formerly stationed in Helmand

Eliciting Intelligence

Replicate successfully demonstrated collection techniques that enable the local populace to provide intelligence on the adversary network

Draw out valuable intelligence from the local populace with battalion level assistance teams, district-level tip lines, and cameras en masse.

C-IED forces need intelligence from the local populace in order to defeat the adversary network. To get it, the local populace must trust the C-IED force and feel safe enough to support them without fear of retribution. Currently C-IED forces do not have the best tools or CONOPS to provide the locals with safe, trusted communications channels for valuable intelligence sharing -such as anonymous methods. As a result, even if the C-IED force is able to engage the local populace and win its tacit support, the C-IED force may still lack information that it needs to defeat the adversary network.

Successful Collections Techniques for AtN

Replicate village-specific, functional assistance teams at the battalion/ brigade level to leverage information collection on the local network while administering specific, local services (e.g. farming, medical, veterinarian)

Replicate below the provincial level successful anonymous tip lines for the local populace to report IED activity by developing a repeatable CONOPS, training, and equipment package to implement and transition to ANSF

Provide digital or Polaroid cameras to every local for their personal use and to benefit intel for C-IED network

"Every Marine gets some training on things they should be looking for and reporting, but we need everyone on the battlefield to be a collector." – USMC Brigade Operations Officer formerly stationed in Helmand

Hitting the Ground Running

Maximize knowledge transfer between deploying units within AORs to ensure war fighters will hit the ground running and get smarter faster

Transform knowledge sharing from unit to unit with new continuity capabilities like "virtual deployments", unit librarians, and transition facilitators.

Given that they have relatively short deployment cycles, war fighters cannot afford to spend weeks building situational awareness, particularly when the unit they are replacing have already built that awareness and those intelligence-yielding relationships with the local populace. Current knowledge-transfer practices between units are inconsistent and often ineffective in terms of leveraging each others' experiences. As a result, unit effectiveness suffers, creating a repeating cycle of deployments that begin with re-learning existing knowledge.

Effective Knowledge Transfer Cycle

Pre-deployment

- Virtual participation from CONUS in theater planning meetings at the battalion-level and below starting six months before deployment (e.g. VTCs)

Mid-deployment

- Provide all companies with a laptop, templates, and any other tools needed to maintain and share web-enabled "AOR Dossiers" with their replacements to catalog intelligence, local relationships, patterns of life, best practices, lessons learned, etc.
- Provide one full-time equivalent contractor or civilian per company to act as librarian or scribe
- Create a portal that organizes all current AtN knowledge, AARs, and TTPs from J-KNIFE, CALL, MCCLL, and other relevant locations

Post-deployment

- Develop, then institutionalize a mentor program where a portion of outgoing staff goes to PTP, home-station, or Mojave Viper to shadow the forthcoming replacement unit instead of going straight home

"Virtual pre-deployments in planning meetings is a great call… educate people that sharing information should be their number one priority." – USMC Battalion Operations Officer formerly stationed in Helmand

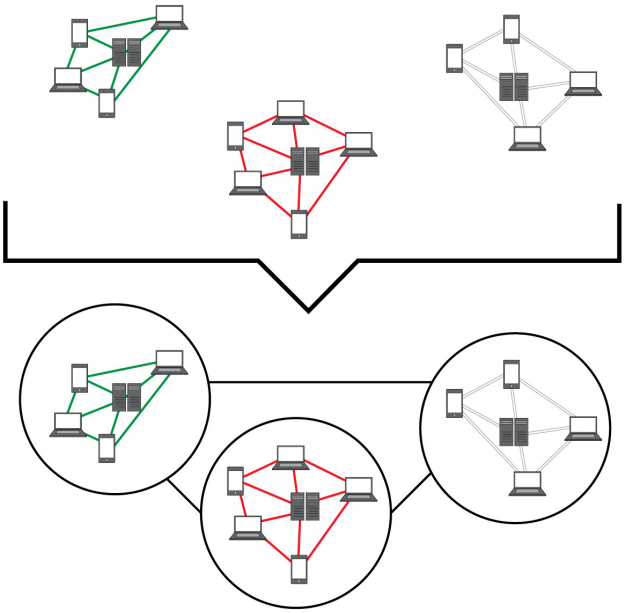
Integrating Red, White and Blue

Revamp information sharing across operations to enable war fighters to connect the dots across friendly and adversary networks

Revamp knowledge management with a new integrated, shareable, and accessible system that connects enemy (red), neutral (white), and friendly (blue) forces network information across census, reporting, TCAPF, and intelligence platforms.

War fighters need to integrate knowledge on various networks to "connect the dots" and distinguish the local populace from the enemy. Currently, many systems that hold information on red, white, and blue networks do not interface. Information is stuck on hard drives and localized. There is no standard AtN lexicon that enables meta-tagging and knowledge transfer. Moreover, relevant information that is quickly perishable is over-classified, which prevents it from being integrated with pertinent, unclassified information. As a result, the war fighter is limited in his ability to leverage the information that others have collected.

Integrating Enemy, Friendly and Neutral Networks



- Develop an information storage, access and analysis capability with the following characteristics:
  - Integrates white, red, and blue network information among the census, social networking, operational reporting and TCAPF systems
  - Is sharable across tactical boundaries and C-IED units (i.e. minimizes information silos)
- Develop a common lexicon for AtN that facilitates data transfer
- Incorporate system training and use in building-block AtN battle staff training throughout PTP

"If I had a hundred million dollars, I would put it all here and communications."
– USMC Platoon Commander formerly stationed in Helmand

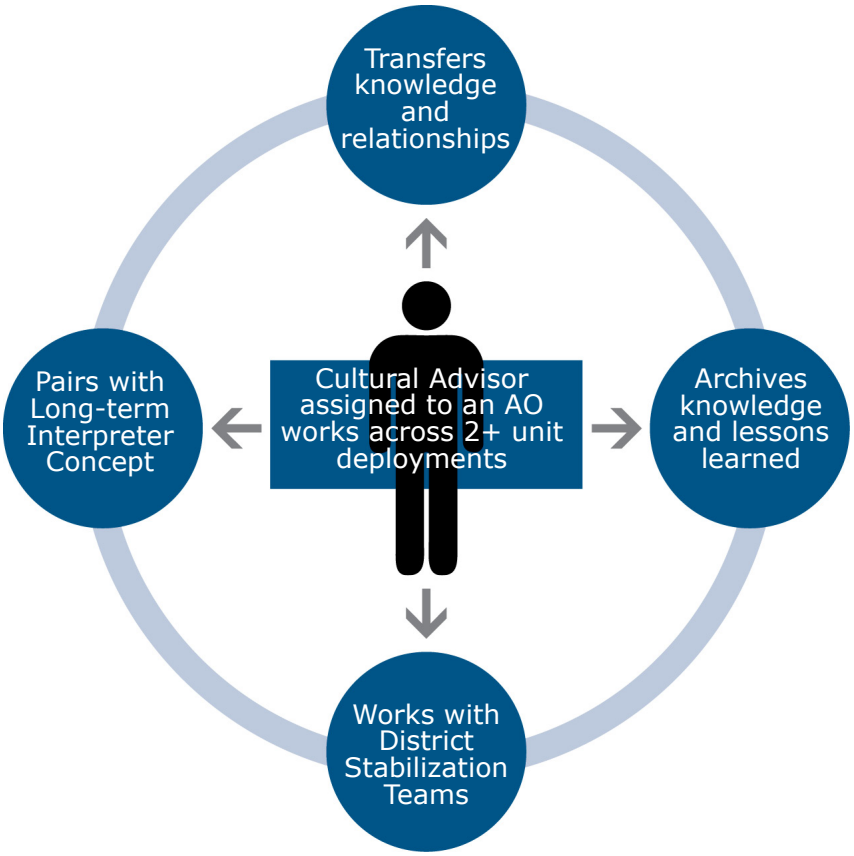
Battalion-Level Cultural Advisors

Assign each battalion a cultural advisor to maintain and transfer relationships and cultural knowledge across US deployment cycles

Transform local relationships and connect rotating units through battalion-level cultural advisors that dwell in an area of operation.

War fighters arriving in theater need to "hit the ground running" in order to be effective during a short deployment. Yet, their frequent turn-over and their returning to different areas of operation slows them down when they get to theater. Units rarely have someone who provides them continuity of knowledge in their area of operations, including information on patterns of life, success or failure of previous operations and the local culture. As a result, their relationships with the local populace – critical in defeating the adversary network - and their understanding of both friendly and enemy networks is slow to develop and often lost when a replacement unit arrives.

Benefits of a Battalion-Level Cultural Advisor



"I think we should have these cultural advisors at the Battalion level... it's not happening now." – USMC Brigade Operations Officer formerly stationed in Helmand

Grassroots Information Operations

Drive IO capability and authority down to the battalion level to enable rapid fire execution of locally-tailored and integrated IO campaigns

Transform IO at the battalion level by new authorities, training, and equipment for tactical commanders.

Local commanders need the ability to counter the Taliban's dominating IO campaign in order to prevent the local populace from supporting or actively participating in IED activity. Currently battalions lack the authority, training, and equipment to compete effectively with the Taliban in an IO campaign, even though the battalion-level, which fights the enemy for the locals' support on a daily basis, has the potential for significant influence. When this potential is not realized, the war fighter loses the local populace's support and the ability to co-opt the adversary network.

Changes Required Transform IO Operations at the Battalion-Level

Doctrine	• Revise policy allowing battalions to make and coordinate IO decisions
Train	• Develop building-block, battalion staff training in IO from home station to PTP to CAPEX • Develop battalion-level IO capability with persons (e.g. XO) specifically trained in IO • Develop generalized IO "plays" that can be adapted for a local Afghan area • Reinforce "plays" with a body of multi-media vignettes around IO to demonstrate success • Publish a CONOPS and multi-media vignettes on successful use of "Radio in a Box"
Equip	• Leverage battalion/brigade level cultural & continuity capability (see previous concept) • Provide standard issue supplies for effective IO to include radio access, radios, printers, ink, etc.

"Each Battalion has an IO cell? That would be good. That is different." – USMC Battalion Commander formerly stationed in Helmand

Religious Information Operations

Challenge the adversary's near-total ownership of the religious narrative to erode their base of support among the local populace

Counter the perception that we are in Afghanistan to destroy Islam by taking aggressive actions to support Islamic religious education and worship. Provide the means for moderate Muslims to safely challenge the legitimacy of the enemy Jihad and make it acceptable for a pious Muslim to work with ISAF and GIRoA.

C-IED forces need to cut the adversary off from their support base among the local populace. The adversary secures this support by branding ISAF and GIRoA as the enemies of Islam. C-IED forces have taken limited means to demonstrate that they are not the enemies of Islam. Afghans who might otherwise publically challenge the legitimacy of the adversary's claim of legal Jihad and the legal use of IEDs are often intimidated into silence. Illiterate Afghans are beholden to radical Mullahs for interpretations of the Koran.

Actions to Counter the Adversary's Religious IO

- Establish policy to build or refurbish Madrassas and Mosques without precondition when entering an area to disarm the narrative: "ISAF is in Afghanistan to destroy Islam"
- Develop "Madrassa/Mosque in a box" kits to quickly improve existing facilities and train engineering units to build Mosques in accordance with Islamic strictures

- Train US Chaplains in value of engaging local religious leaders as "Men of the Book"
- Stop using the religiously honorable word "Taliban" in all ISAF conversation and print

- Provide pro-GIRoA Mullahs with (indigenous) personal security and radio call-in programs to openly and actively challenge the Taliban to on-air debates about the legality of Jihad where ordinary Afghans can call in anonymously with their observations and opinions about the Taliban

"This is the audacious thing we need to pursue… this attacks the Taliban ideological base." – Operations Officer, Task Force Paladin

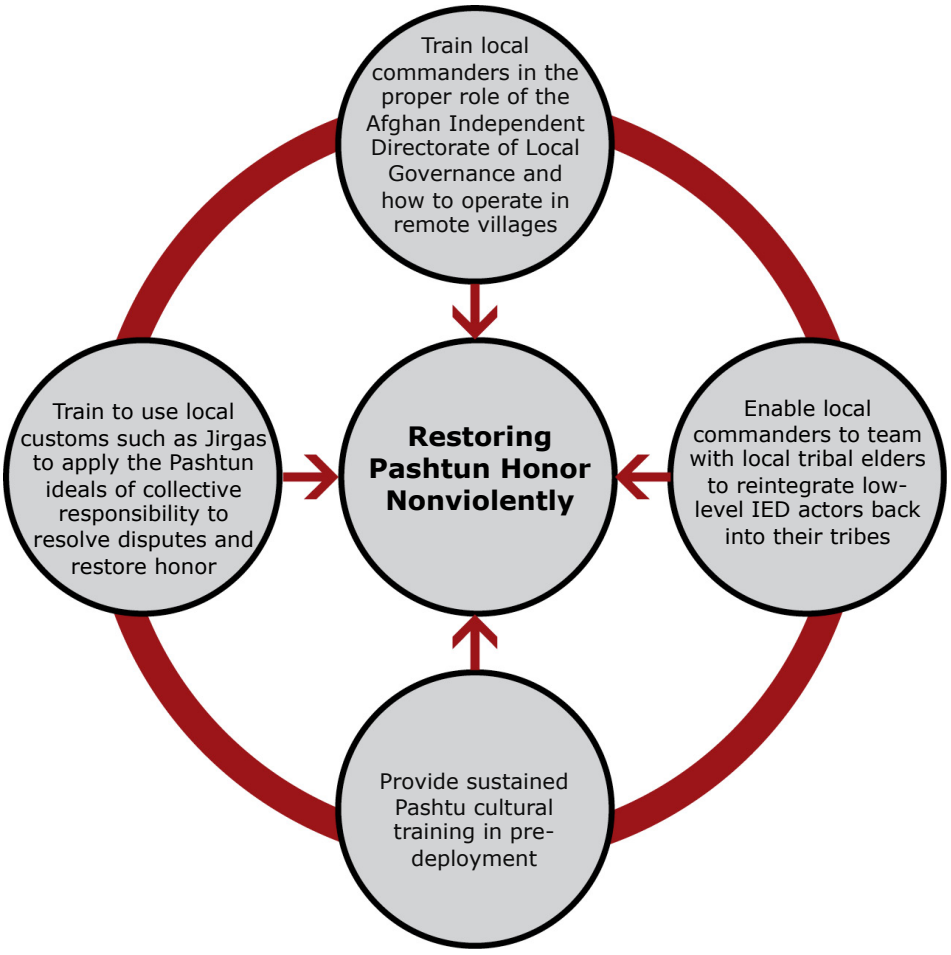
Restoring Honor Nonviolently

Participate in civic venues that restore honor to Pashtuns who are inadvertently dishonored by US forces and then turn to the adversary

Participate in Jirgas and Shuras where Pashtun men can seek restitution for slights against their honor without resorting to violence.

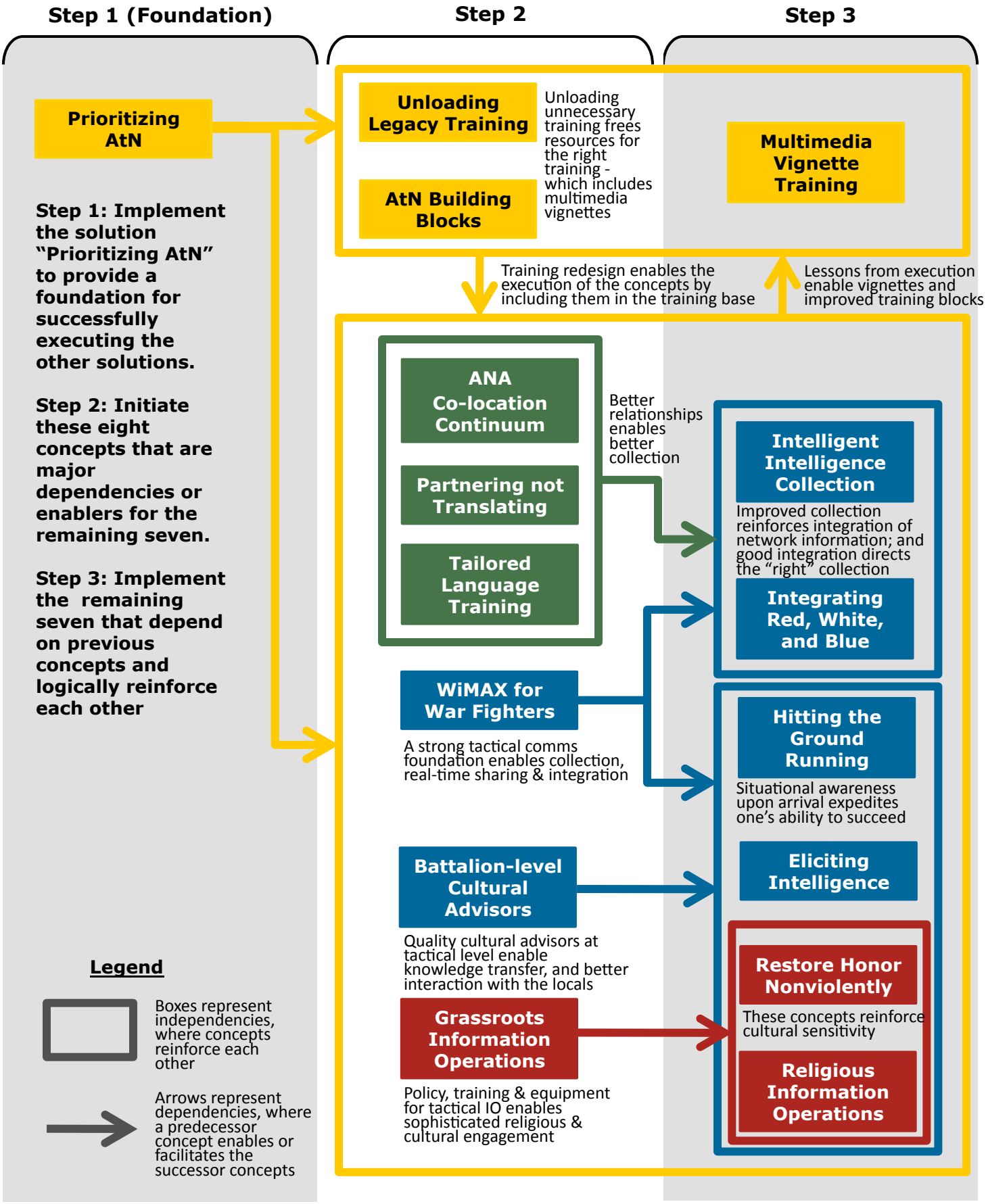
Pashtun men need to maintain their honor above all else and often feel compelled to use IEDs as a way to regain their honor after a member of the C-IED forces violates it. C-IED forces do not understand that what it considers to be a minor infraction might be a serious offense to a Pashtun man. Currently, training on how to leverage jirgas and shuras to appease dishonored Pashtuns so that they do not join the adversary network is limited. Policy to allow local commanders to use these venues to deal with low-level IED actors in concert with local tribal elders is also missing, so these young men go to prison where they are further dishonored by C-IED forces and sometimes radicalized.

Policy and Training Adaptations Required to Help C-IED Actors Participate in Civic Venues



"These are really good – working with the locals to deal with emplacers is critical." – Operations Officer, Task Force Paladin

Steps to Implementing the AtN Solutions



Call for Further Action

***Attack the Network: An Innovation Project* offers a proof of concept that uses an innovative commercial methodology to identify an organizational framework and an innovative set of 16 solutions for attacking the network at the tactical level. Implementing the prioritized solutions is fundamental; however, additional knowledge and solutions must be uncovered to improve our attack the network capabilities. We recommend the following actions:**

1 Map the experience of other AtN Stakeholders to complete the initial set of solutions.

- The US Soldier: To scope the enormous IED problem in Afghanistan, we geographically scoped the problem to Helmand, which operationally scoped our work to the Marines primarily. Army soldiers have AtN needs. They may align or differ from the Marines in Helmand. Where they align, similar solutions may apply. Where they differ, new solutions apply. These insights will come with specific mapping of their experiences.
- The Adversary: Legal and administrative issues prevented this project from adequately mapping the experience of the IED actor, an important constituency to understand when developing solutions that satisfy the needs of the target populations. An analysis of their experiences will reinforce and support this set of solutions and other programs at JIEDDO and AFRL that require this understanding.
- The Operational and Strategic Levels of War: This proof of concept provides solutions mapped precisely to the needs of populations at the tactical level. Solutions for the C-IED force and local population at higher levels of leadership will reveal new and complimentary solutions.
- The Local Youth: Time, resources, and access limited our contact with the local populace to tribal elders facing the IED problem in Afghanistan. We must understand the holistic needs of the local youth, particularly the disenfranchised, to provide C-IED forces with the most comprehensive solutions for attacking the network.

2 Expound the requirements in detail for some of the more complicated solutions.

- Some of the current solutions recommended in the integrated set of 16 are necessary and complimentary, but the ramifications across the DOTMLPF are so extensive (e.g. overhauling pre-deployment training around AtN) that they must be developed in greater detail by applying additional innovative methods or through working groups.

3 Utilize open collaboration methods to expedite the resourcing of priority playbook solutions.

- Applications in whole or in part already exist for many of the 16 solutions recommended in this playbook - they must only be found. Speed in identifying them is useful for the war fighter in the field. Open collaboration methods offer an expeditious means of identifying current applications in the military and commercial markets for resourcing some of these solutions.

AtN beyond Helmand and after Afghanistan

The geographic focus of this project was on the southern Helmand districts of Lashkar Gah, Garmsir and Nawa. The solutions proposed here are specific to the experiences of C-IED forces, IED actors, and the local populace who were in that area in 2009-2010. The diversity of Afghan culture means that not all of these solutions will be applicable beyond southern Helmand province. Restoring Honor Nonviolently, which leverages local cultural norms to the Pashtun men of this area is a prime example of a solution that may not work in other culturally-diverse regions. Other solutions that address issues universally present when IEDs are employed in a COIN environment will be applicable beyond southern Helmand province and after Afghanistan.

The history of warfare provides numerous examples of innovations that persist long after a conflict has ended. The crude ironclads and submarines of the US Civil War, the tank of WWI, and the bomber aircraft of WWII became the staples of subsequent wars. Given the tactical advantage and the strategic impact provided by IEDs in today's conflicts, we should clearly expect them to survive beyond the withdrawal of the United States and allied forces from Afghanistan – in fact, we should expect them to thrive. Advancing technology, lower costs, and the quick spread of information make the IED an effective weapon easily available to a wide range of potential adversaries. Moreover, the amplifying effect of the media has turned the IED into a weapon of strategic impact, attractive to any adversary seeking to challenge the conventional power of the United States and its allies on the world stage.

AtN is the answer to that challenge now and in the future. The lack of institutionalized AtN skills in the US military and the technical prowess of the United States conspired to drive us to focus on Defeat the Device to address the IED threat when it arose in Iraq and then Afghanistan. A robust AtN capability could have prevented the placement of many of the IEDs that killed several thousand US war fighters and civilians from the US and the host nations. Our military men and women learned how to attack the adversary network while "on the job." The cost of learning these skills in theater instead of in pre-deployment training was high indeed. If these hard-won AtN skills are not captured and institutionalized in our peace time training regimens, then our Nation will pay that same price again in a future conflict when we send young men and women ill-prepared for the threat they will face to re-learn the same AtN skills while on the job.

Acronyms

AAR: After Action Report

AFRL: Air Force Research Laboratory

AKO: Army Knowledge Online

ANA: Afghan National Army

ANP: Afghan National Police

ANSF: Afghan National Security Forces

AOR: Area of Responsibility

AtN: Attack the Network

CALL: Center for Army Lessons Learned

CAPEX: Capability Exercise

C-IED: Counter-IED

COIN: Counterinsurgency

CONOPS: Concept of Operations

CONUS: Continental United States

DOTMLPF: Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities

GIRoA: Government of the Islamic Republic of Afghanistan

IED: Improvised Explosive Device

IO: Information Operations

ISAF: International Security Assistance Force

JET: Joint Expeditionary Team

JIEDDO: Joint Improvised Explosive Device Defeat Organization

J-KNIFE: JIEDDO Knowledge and Information Fusion Exchange

MCCLL: Marine Corps Center for Lessons Learned

MCWL: Marine Corps Warfighting Laboratory

MEB: Marine Expeditionary Brigade

METL: Mission Essential Task List

NGO: Non-governmental Organization

PTP: Pre-deployment Training Program

SME: Subject Matter Expert

TCAPF: Tactical Conflict Assessment and Planning Framework

TF: Task Force

TTP: Tactics, Techniques and Procedures

USAID: United States Agency for International Development

USMC: United States Marine Corps

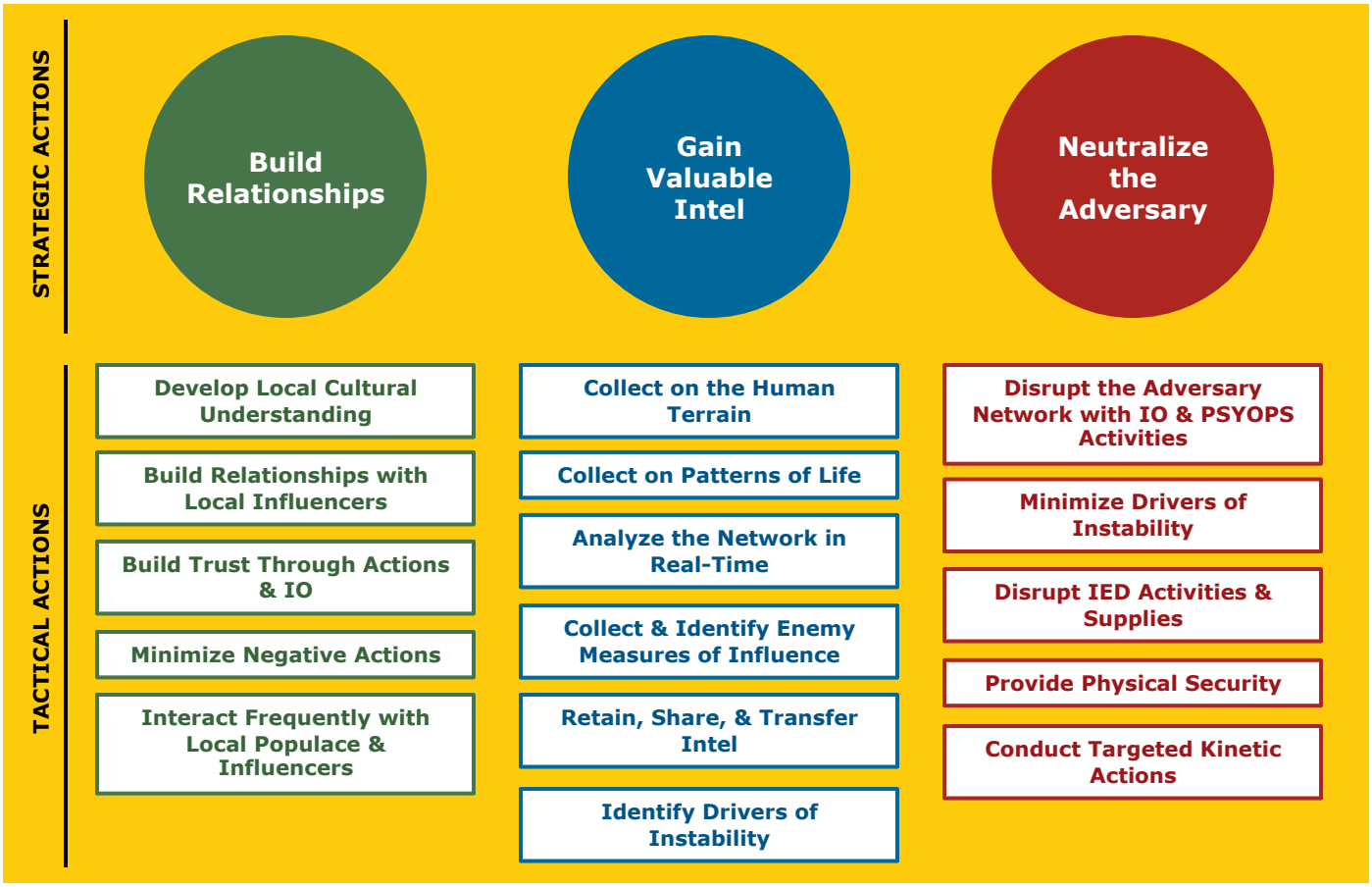
WiMAX: Worldwide Interoperability for Microwave Access

XO: Executive Officer

A Detailed Framework for the AtN Solutions

The contemporary approach to attacking the adversary network is imbalanced toward lethal actions against adversary networks. This approach must be expanded. We propose a more comprehensive framework that represents the range of actions implemented by war fighters who successfully attacked the adversary network in Helmand province. This includes building relationships to gain valuable intelligence that informs lethal and non-lethal actions to neutralize the adversary. The solutions on the following pages correspond primarily to the strategic actions and address multiple tactical actions simultaneously. The solutions as a whole provide an integrated set that aim to address the needs of war fighters and locals across the range of AtN actions.

Our myriad interviews with veterans revealed this gap: a common and consistent, operational framework that captures the range of attack the network actions. This graphic organizes what they said they did to attack the network successfully. It is the logical, organizational framework for our integrated set of AtN solutions. This framework for attacking the network requires the strategic actions of building relationships with the local populace while simultaneously gaining valuable intelligence on the adversary network, and neutralizing the adversary through kinetic and non-kinetic operations. Each of the three strategic actions of this framework can be further subdivided into several supporting tactical actions.



This AtN Playbook was created in September 2010 by Toffler Associates and 4iNNO for the Joint IED Defeat Organization (JIEDDO) and Air Force Research Laboratory (AFRL) in support of the United States' strategy in Afghanistan and based on the best information available at the time.