HQ USINDOPACOM

Rapid Innovation Fund Project Status

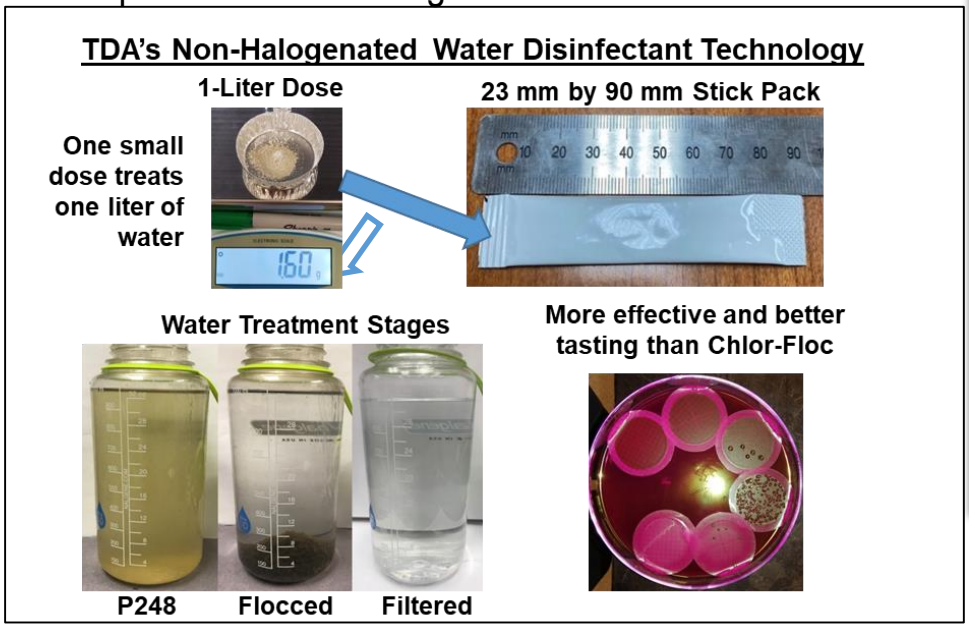
March 4, 2021

This brief is classified:

Distribution A: Approved for public release. Distribution Unlimited

RIF: Individual Water Purification Powder

- SUMMARY – Current halogenated individual chemical water purification options risk health issues when added to water containing significant organic matter, as halogens can react to form halogenated organics which can be endocrine disrupting compounds. Desired formulation will disinfect, remove heavy metals, mitigate chemical warfare agents and select toxic industrial chemicals, and will clarify the treated water.
- Operational Benefit: - Delivers halogen-free, broad-spectrum water purification for Warfighters in austere conditions.



Schedule

- 1Q FY19 Project Kickoff
- 2Q FY21 Completion of powder formulation & DT
- 3Q FY21 OP DEMO and MUA, Bellows AFS, HI
- 4Q FY21 Initiate transition to DEVCOM Natick Soldier System Center

Results to Date

- 4Q FY19 Initial formulation developed
- 4Q FY20 Formulation revised
- 1Q FY21 Initiated transition dialog w/NSSC
- 1Q FY21 Added CWA/BWA independent testing task

Transition: Operational prototypes for leave behind. Working with DEVCOM Natick Soldier Systems Center to explore transition options.

Issues: Seeking follow-on project opp'ty to support transition.

TM: Dr. Girish Srinivas, TDA Research, Golden, CO

OM: Dr. Mike von Fahnestock, USINDOPACOM

RIF: Intelligent Logistics Planning System (ILPS)

- SUMMARY – USINDOPACOM requires the capability to determine and assess current logistics challenges and develop forecasts that anticipate sustainment requirements up to and in excess of 30 days anywhere within the AOR.
- Operational Benefit: - leverage various artificial intelligence techniques, including Deep Learning, Expert Systems, and other machine learning techniques, along with team expertise on past, current, and future logistic concepts to develop a planning system that enhances the capability to anticipate potential supply chain issues, distribution shortfalls, and/or other unseen/unexpected logistic hurdles that might impede mission success

Schedule

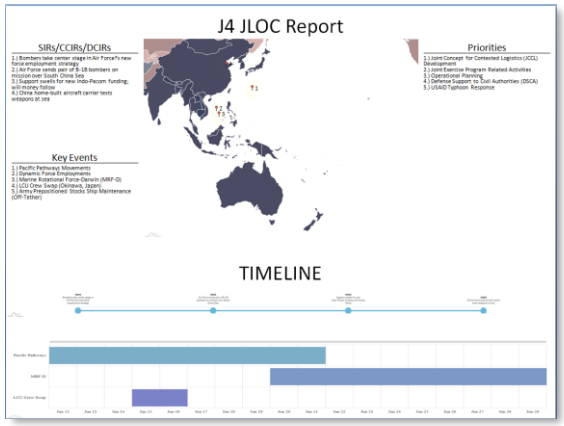
- 3Q FY19 Project Kickoff
- 1Q FY20 Senior Leader Coordination
- 3Q FY21 JLOC Planning Tool Prototype
- 3Q FY21 TPFDD Forces Planning Tool Prototype

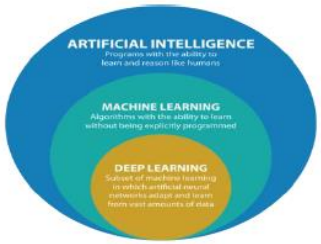
Results to Date

- 4Q FY19 Defined Operational Requirements
- 2Q FY20 Initial System Design/Architecture
- 1Q FY21 System Requirements Defined
- 2Q FY21 Refine Collected Log Data
- 4Q FY21 Prototype TPFDD Forces Planning Tool

Transition: Operational prototype transition to USINDOPACOM J4 Joint Logistics Operations Center

Issues: Limited access to secure facilities due to COVID-19. Performer maximizing opportunities to obtain remote access.





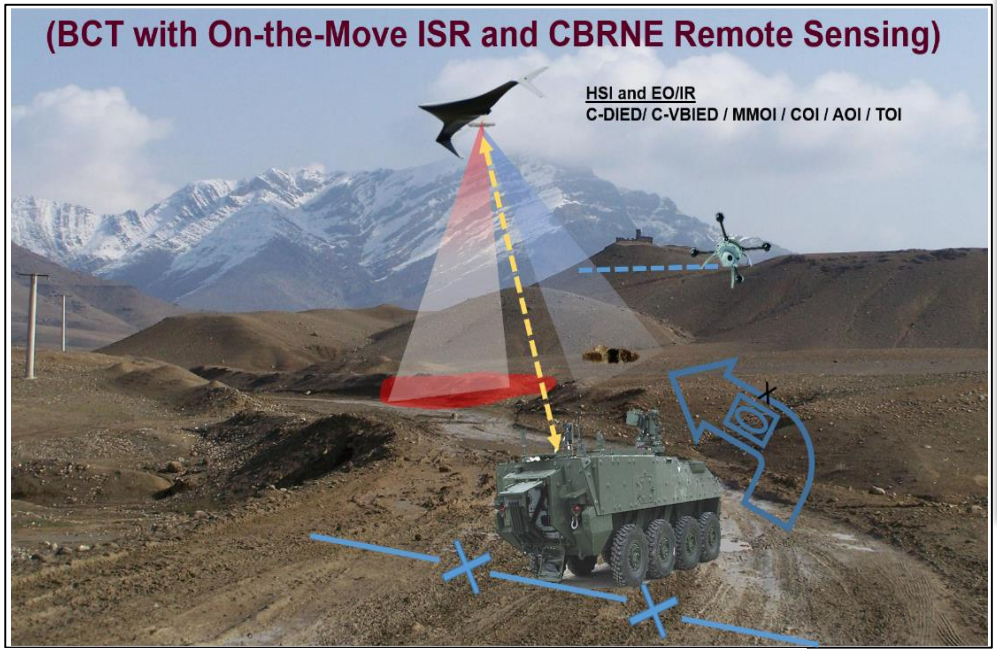
Intelligent Logistics Planning System (ILPS)

TM: Mr. Charles Cohen, Cybernet, Ann Arbor, MI

OM: Mr. Kawakahi Amina, USINDOPACOM

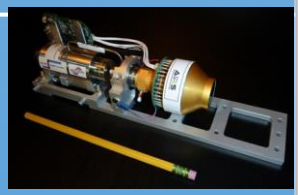
RIF: Hyperspectral CBRN Aerial Reconnaissance Sensing (HyCARS)

- SUMMARY – HyCARS delivers an ultra-compact, cost effective hyperspectral (HSI) payload for Group 3 UAV and High Altitude Balloon platforms. Delivers low-SWaP HSI for autonomous, wide-area chemical plume, disturbed earth, camoflauge, airfield damage and other target identification with AI-enabled on-board processing.
- Operational Benefit: - Provides, cost-effective, on-the-move, wide area surveillance capability for Integrated Early Warning and Agile Combat Environment Campaigns.



Schedule

- 3Q FY20 Project Kickoff
- 4Q FY20 BDE On-the-Move Remote Sensing TTX
- 4Q FY21 Sub-system Tech DEMO, Tucson, AZ
- 2Q FY22 System Tech DEMO, Bellows AFS, HI
- 3Q FY22 OPDEMO, RIMPAC, HI



Results to Date

- 4Q FY20 Completed TTX and drafted initial CONOP
- 1Q FY21 Coordinated for payload integration into USARPAC Raven-X Project' Group 3 UAV
- 2Q FY21 Coordinated with Indigo Hybrid-VTOL RIF to incorporate payload onto that Gp 3 UAV

Transition: Briefed JPEO CBRN Defense on applicability for Integrated Early Warning and Agile Combate Environment Campaigns.

Issues: Seeking follow-on project opp'ty to support transition.

TM: Dr. Alan Samuels, DEVCOM Chem Bio Center

OM: Dr. Mike von Fahnestock, USINDOPACOM

RIF: Group 3 Vertical Take-Off and Landing (VTOL) UAS

- SUMMARY – This RIF BAA project will demonstrate a Group 3 (55 - 1320 lbs) Vertical Take-Off and Landing (VTOL) Unmanned Aerial System (UAS) with reconfigurable payload and maritime/land recovery capabilities.

- Operational Benefit: - Enables runway free operations with reduced manning and low footprint for C3ISR functions.

G Schedule
- 4Q FY20 Project Kickoff
- 1Q FY21 Preliminary airframe design provided
- 2Q FY21 Final airframe design finished

G Results to Date
- 2Q FY21 Payload bin/Functions completed
- 2Q FY21 Airframe fabrication has commenced

G Transition: Operational prototypes for leave behind. Working with DoD experimentation and program offices to conduct flight and payload demonstrations for INDOPACOM transition

G Issues: Nothing to report

OM: Wayne Liu, NIWC PAC