

Force Protection – Basing TeCD 1a

17 October 2012

Report Documentation Page

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Revised Challenge Statement

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Problem Statement: It takes too long and too much manpower to deploy, set up, protect, sustain and relocate Combat Outposts (COPs) and Patrol Bases (PBs).

Challenge: Formulate a S&T program to reduce the percentage of Soldiers needed to set-up a COP/PB and protect against threats (including small arms, indirect fires, air delivered weapons, and CBE) in austere, restricted terrains.

Challenge Boundary Conditions:

Who: Focus on Combat Outposts and Patrol Bases in a variety of complex and urban terrains

What: Representative 2011 COP/PBs baseline indicates that it takes 60-90 days using 70% of the manpower assets (i.e., 70% not available for mission tasks)

How: Measure impact on Soldier availability and set-up time







Objectives:

Near term (FY17): Increase Soldier availability for mission tasks vs. set-up and security tasks to 50% in 30 days with increased force protection; decrease tear-down time to no more than 4 days and increase the percentage of material reusable at next COP/PB within 100 miles. 2

Lifecycle of a Small COP

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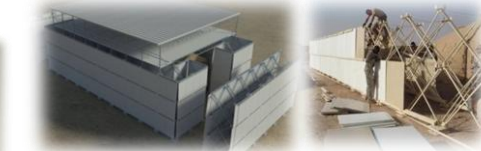
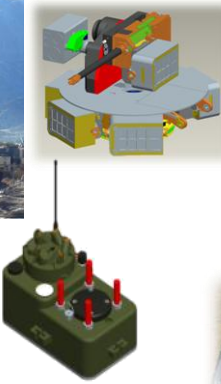
Pre-Deployment Planning	COP Construction	Operation	Relocation
			
<p>Planning Tools</p> <ul style="list-style-type: none"> • Site selection and layout • Threat assessment • Geo-environmental impact on mission • Risk and vulnerability assessment • Construction planning • Equipment and material requirement lists 	<p>Troop to task allocation</p> <ul style="list-style-type: none"> • Construction • Security • Missions outside the wire <p>COP construction complete in 30 days</p> <p>Increased situational awareness from enhanced sensors during COP construction</p> <p>Security is increased with remote weapons systems and precision munitions</p>	<p>Troop to Task allocation</p> <ul style="list-style-type: none"> • Increase percentage of Soldiers available for outside the wire missions <p>Organic force protection capability like that of large FOB</p>	<p>Troop to Task allocation</p> <ul style="list-style-type: none"> • COP teardown • Security • Missions outside the wire <p>Repackage and reuse of materials</p> <p>More reliance on sensing and active defense as protective structures and barriers are removed</p>

Technology Thrust Areas

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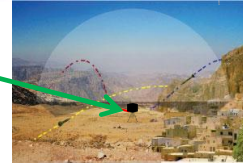
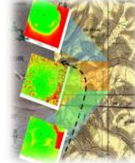
Fewer Soldiers needed for security with active defense



Rapidly emplaced protection material decreases construction time for barriers, TOC, sleep areas, mortar pits



- Man portable protection materials
- No equipment required



Increased awareness through sensing and detecting technologies, fewer Soldiers required to secure perimeter



Planning tools allow leaders to construct COP/PBs efficiently and effectively providing quicker construction time and improved troop-to-task

Planning Tools	Active Defense	Protected Structures and Barriers	Enhanced Sensors
Planning and construction handbook	Remote weapons systems	Perimeter protection	Detection of incoming RAM attack
Troop to task guidelines during construction	Precision munitions	Protection of critical assets (fuel, water, ammo, sleep areas)	Increased situational awareness of enemy movement
Integration techniques on COP/PB	Non-lethal deterrence	Protection of TOC (sidewall and overhead cover)	Integrated sensor architecture (DFP)
Geospatial analysis planning tool		Protected guard towers	
		Protection of ECP	

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Purpose:

Demonstrate ability to plan and construct a protected COP/PB in 30 days with integrated protective construction, sensing and active defense capabilities

Results/Products:

- Baseline COP construction handbook and decision support tools for planning of overall basing architecture for integration of force protection and basing functions
- Planning tools for the complete lifecycle of the COP with integrated force protection and basing (pre-deployment, construction, operation, relocation)
- Protective structures with overhead cover, perimeter barriers, and guard towers rapidly constructed with few soldiers and no additional equipment
- Lethal and non-lethal munitions to engage threats with reduced collateral damage to achieve protection levels like large FOBs
- Sensor systems providing increased situational awareness of area around COP and ability to locate and identify threat

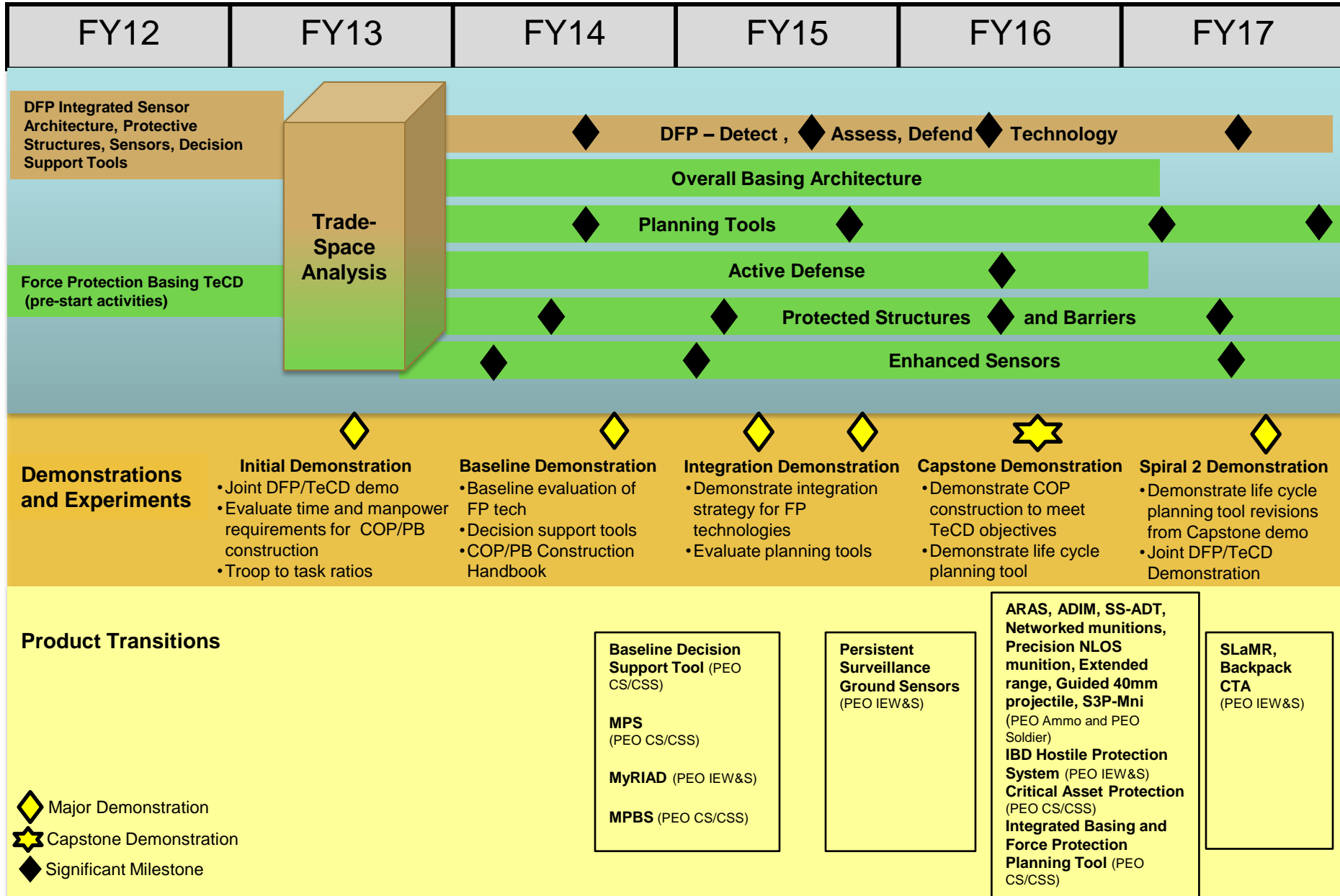
Payoff:

- Increased Soldier availability for mission tasks vs. set-up and security tasks to 50% in 30 days
- Force protection levels like larger FOB
- Decreased COP tear-down time to ≤ 4 days
- Increased percentage of reusable material to 50%



Overall Milestone Chart

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Points of Contact

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