



AAR Analysis of Javelin Use in OEF

The After Action Review (AAR) Material:

- AARs of Javelin use primarily in OEF, 2010-2011
- Across eight division or independent brigades
- Primarily small-unit personnel: Gunners; Team, Squad, and Platoon Leaders
- Infantry (Light, Heavy, Airborne, Air Assault), Cavalry, Marines
- 13 Hours of interview video, 311 pages of additional interview transcripts and summaries,
- 261 interviewees and an additional 66 Responses to a Structured Survey,



Analytic Challenge:

- Surveys are statistically valid but with limited insight.
- Interviews were insightful, but not statistically valid.

"It is a really simple system, I absolutely fell in love with that thing. Really simple and very effective."

- Master Javelin Gunner (fired 20 Javelins)

Analysis Methodology:

- Identified major bottom-up themes
- Rated every comment in every interview against the 21 major bottom-up themes
- Evaluated each theme for consistency with every comment
- Evolved themes into findings using consistency and number of relevant comments
- Evaluated findings in the context of survey results

This hybrid methodology produced findings that were more insightful than survey results, and more statistically valid than individual interview comments.

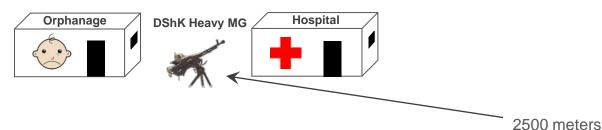


Our Most Powerful Finding:

RaytheonMissile Systems

Finding 1.1: ROE Friendliness

ROE Friendliness: There is a widespread misperception that the Javelin System is not ROE-Friendly, due to likely collateral damage. This misperception fades as gunners and leaders learn more about system capabilities.



56 ++ + - -
Comments 28 27 1 0

L1: Clear, Unambiguous, Common

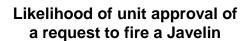
The Misperception: This Javelin shot will likely result in collateral damage to the Orphanage or Hospital.

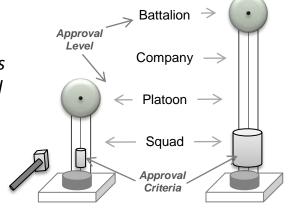


The Reality: A trained gunner can reliably make this shot, with minimal collateral damage.

"Immediately people just perceive it as something that is going to cause mass damage. And, as we use them we realize that it's obviously very precise, and it doesn't cause a whole ton of damage. ... If I had known their capabilities, like I know them now, I would definitely have pushed to use them early on."







Unit Familiar with Javelin's Capabilities

Unit Unfamiliar with Javelin's Capabilities

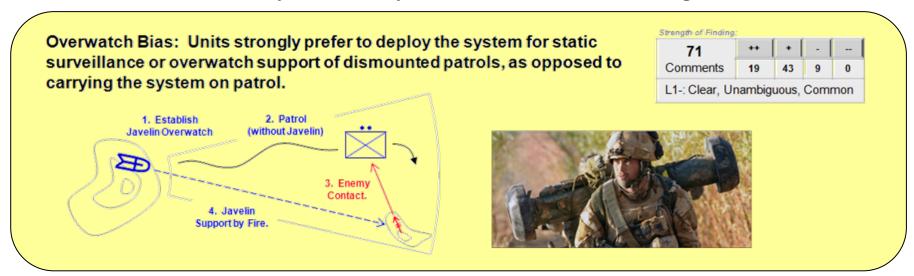
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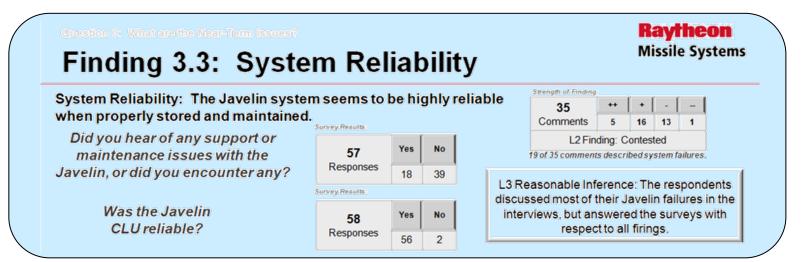


The Hybrid Approach is Superior

Here's a case where the survey led us astray, and the interviews set us straight:



And here is the exact opposite case (surveys corrected interviews):



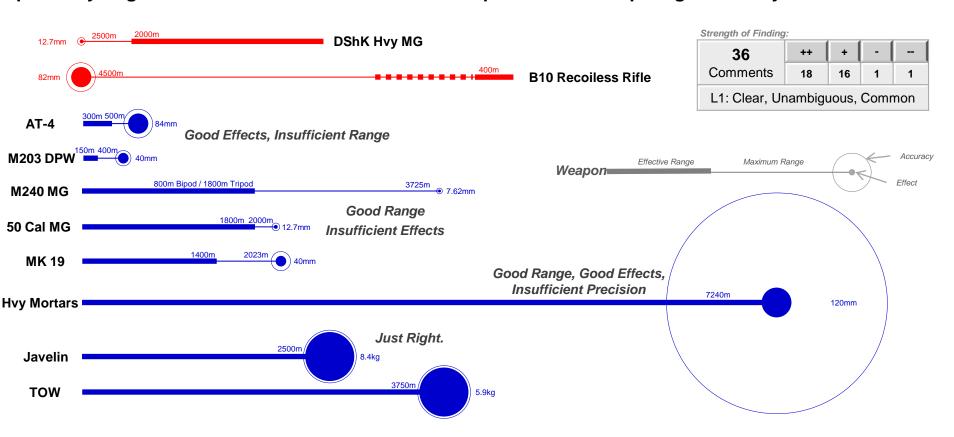
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Other Interesting Findings:



Finding 1.4: Munitions Niche

Munitions Niche: The primary operational niche for the Javelin missile is when a unit needs immediate, precisely targeted effects at distances outside the capabilities of competing combat systems.



"(The Javelin) fills the gap. They got an 82 (mm recoilless rifle), and they like using it because they can be like, a frickin' thousand meters away and hit almost every time, what they're aiming at. It's a very simple point, click heavy weapon that we have no answer to, except for the Javelin. You know what I mean?"

Other Interesting Findings:

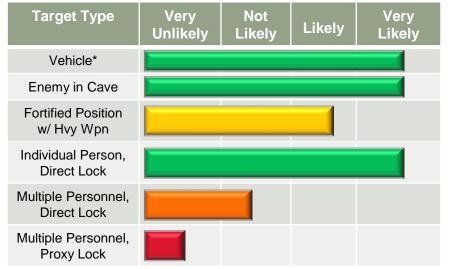
RaytheonMissile Systems

Finding 2.1: Target Types

Target Types: The Javelin warhead has relatively superior effects against fortified positions, caves, structures, and individuals with good locks, but is often less than ideal against multiple personnel.







*L2 finding due to low number of comments.

"When that motor fires, there's no mistaking it. ... they know it's coming. And if they're the ones shooting at us, they know exactly where it's going, and they'll run from that spot."

In other words, the three insurgents, simulated below, would have fled upon hearing the Javelin launch, rather than continue emplacing IEDs.

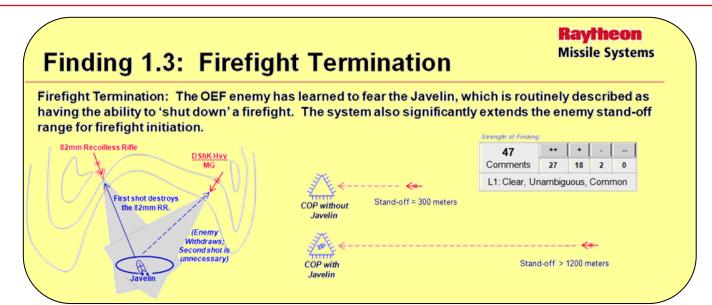


"Once you get them backed into a cave, ... you can drop 120s right on top of these things, ... but these dudes will come out of that just fine, later on. So we found out that the Javelins, you could fire straight into the mouth of a cave, ...it would just blast out the inside of that cave. ... and it was perfect."

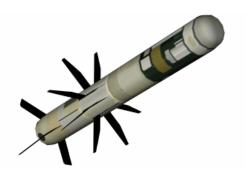


Other Interesting Findings





Finding 2.4: Surveillance Niche Surveillance Niche: The CLU is useful as a supplement to the superior LRAS and ITAS mounted surveillance systems, and is generally preferable to other man-portable systems for OP surveillance. Soldiers prefer the PAS-13 for patrols. AN/ PAS-13 AN/ PAS-13 L1: Clear, Unambiguous, Common



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