Section 7.6 PEO LS Program

HIGH MOBILITY MULTI-PURPOSE WHEELED VEHICLE

Program Background

The High Mobility Multi-Purpose Wheeled Vehicle (HMMWV), commonly known as the Humvee, is a four-wheel drive military automobile produced by AM General. The Marine Corps' most recent variant of the HMMWV is the Expanded Capacity Vehicle (ECV), which is the 4th generation design of the HMMWV. The Marine Corps plans to reduce the HMMWV fleet from 24,000 vehicles to approximately 18,500, with 5,500 of those vehicles subsequently replaced by the Joint Light Tactical Vehicle. The remaining Marine Corps HMMWV fleet of approximately 13,000 vehicles will require sustainment through 2030. The HMMWV Sustainment Modification Initiative proposes to leverage mature and production ready designs/technologies that will help restore the existing expanded capacity variant of the HMMWV to pre-armoring levels in terms of safety, performance, and reliability.

Program Status

The current armoring necessary to secure occupant survivability for operations in Operation Enduring

Freedom has resulted in the HMMWV ECV being burdened with thousands of pounds of weight above its gross vehicle weight, which has reduced driver control, stability, mobility, and reliability.

The PM Light Tactical Vehicles (LTV) conducted technology/concept evaluations at the Nevada Automotive Test Center in FY13 to explore technological possibilities in regard to HMMWV fleet sustainment and upgrades. The results of these evaluations were then utilized to inform and update the HMMWV Operational Requirements Document (ORD). After completion of an ORD Clarification letter, PM LTV was directed by MCCDC to not conduct any HMMWV modernization. The HMMWV program is currently in sustainment.

HMMWV'S Top Technical Issues:

1. Performance

As a result of the armoring levels required to meet the demands of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF), HMMWV fleet performance has been significantly degraded. Technologies are needed that increase safety, mobility, and payload and that restore full performance.

2. Energy Consumption

As a result of the armoring levels required to meet the demands of OIF and OEF, the HMMWV energy efficiency (fuel efficiency) has experienced a severe negative impact. Technologies are needed to restore HMMWV energy efficiency.

3. Reliability/Durability

Technologies are needed that increase the reliability and durability of the HMMWV across the spectrum of its mission profiles.

2 DEC 2014

ACAT IC

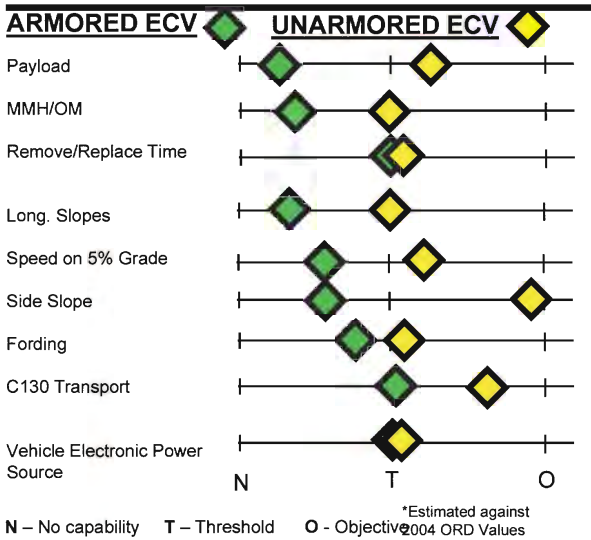
FY15 AAO = 18,500

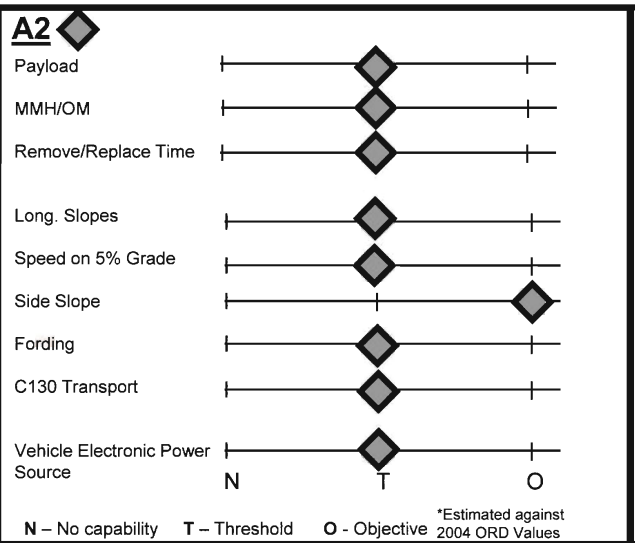
IOC = Oct 1986 **FOC =** Dec 2010

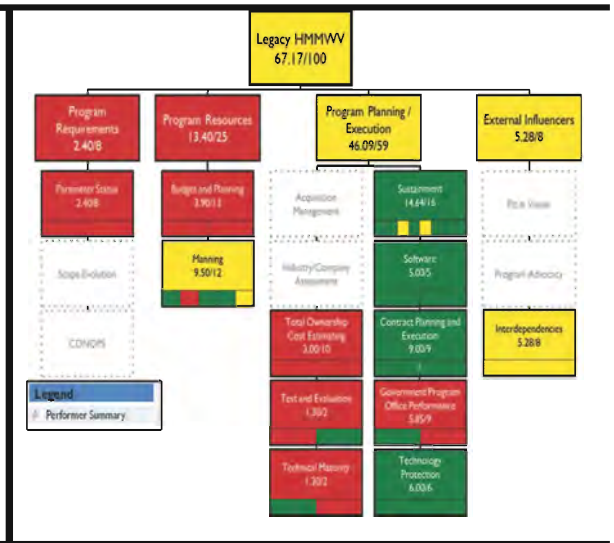
C G S G P G

HMMWV

Description: The High Mobility Multipurpose Wheeled Vehicle (HMMWV) serves as the primary light tactical vehicle for command and control, troop transport, ambulatory support, light cargo transport, armament carrier, TOW missile system carrier, towed weapons mover, and specialized shelter carrier throughout all areas of the battlefield or mission area.

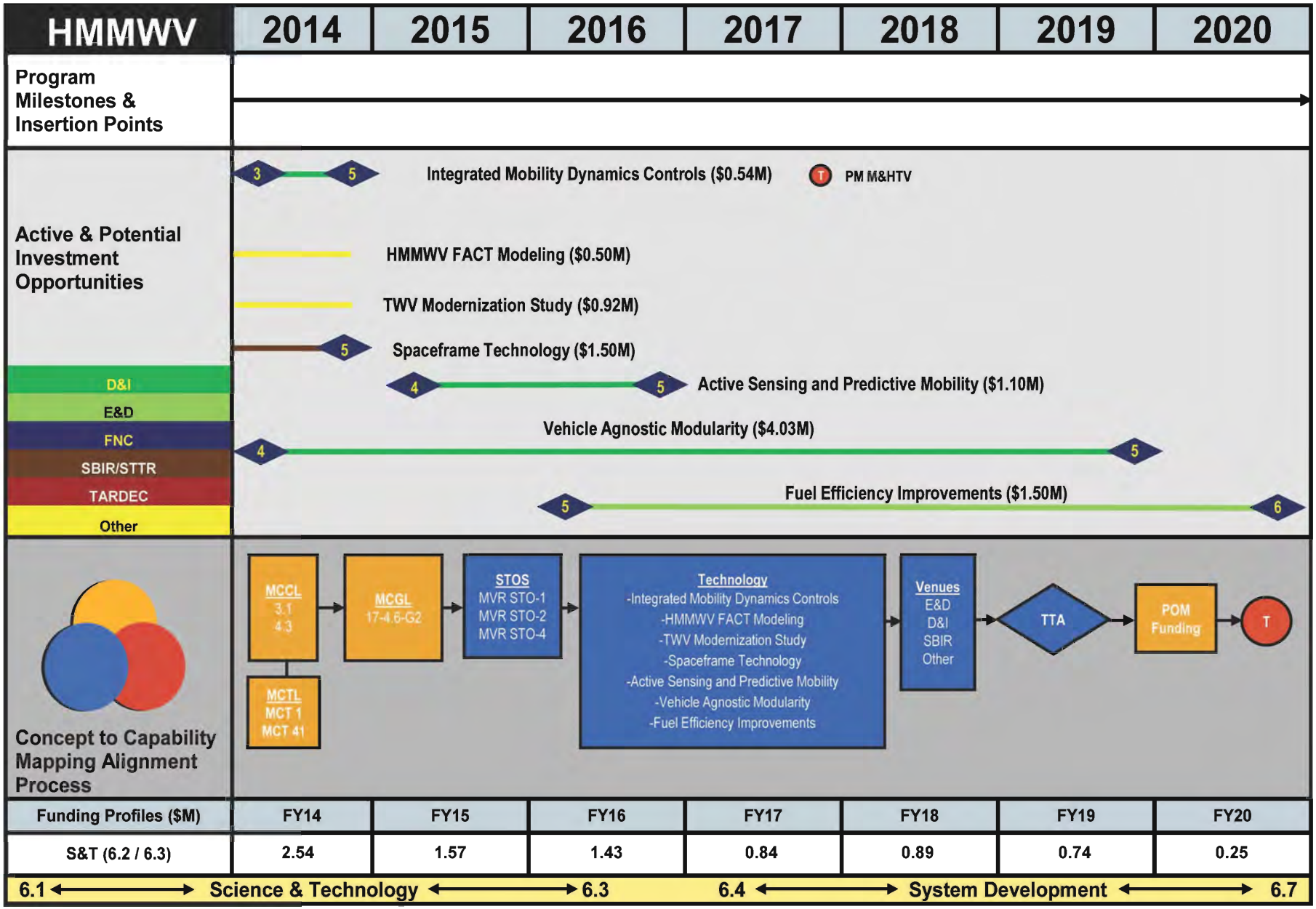






Test Events							
Contract Events							
Qtys							

HMMWV Technical Issue #1 Performance

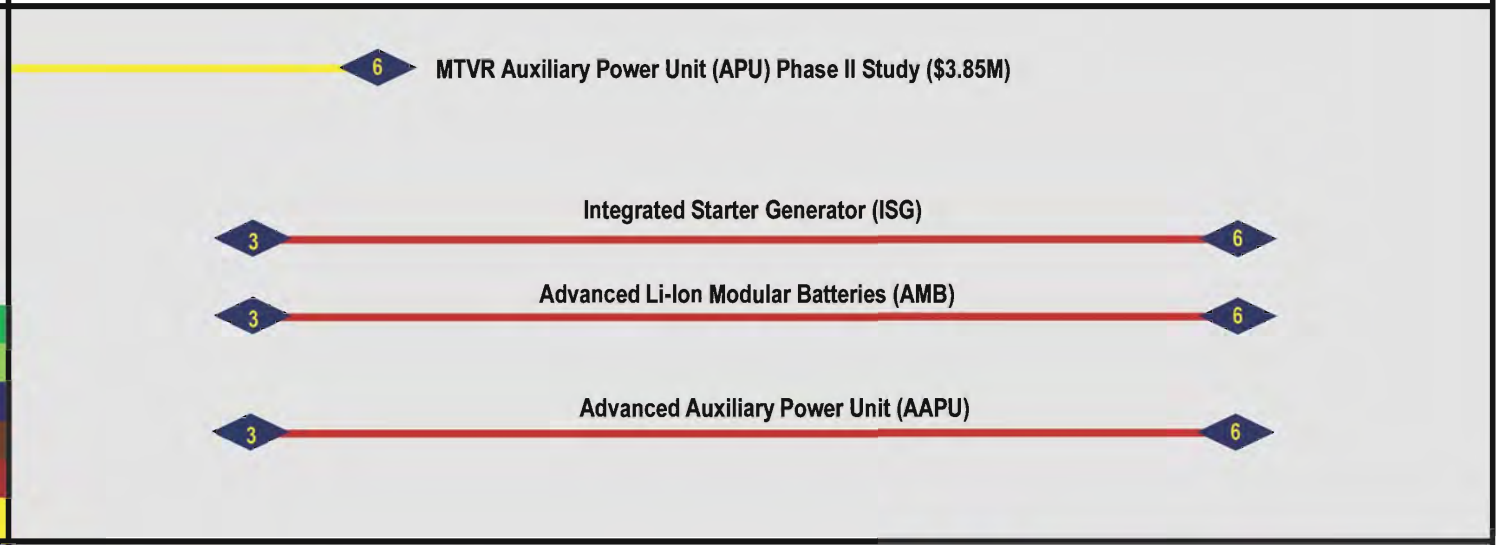


Funding Profiles ($M)	FY14	FY15	FY16	FY17	FY18	FY19	FY20
S&T (6.2 / 6.3)	2.54	1.57	1.43	0.84	0.89	0.74	0.25

6.1 ⟷ Science & Technology ⟷ 6.3 6.4 ⟷ System Development ⟷ 6.7

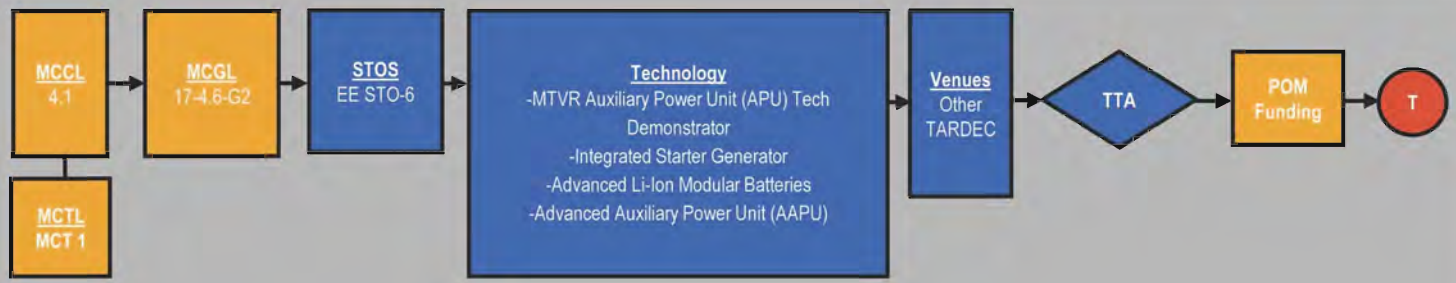
HMMWV Technical Issue #2 Energy Consumption

HMMWV	2014	2015	2016	2017	2018	2019	2020
Program Milestones & Insertion Points							
Active & Potential Investment Opportunities							



D&I
E&D
FNC
SBIR/STTR
TARDEC
Other

Concept to Capability Mapping Alignment Process



Funding Profiles ($M)	FY14	FY15	FY16	FY17	FY18	FY19	FY20
S&T (6.2 / 6.3)	1.50	8.44	13.23	10.90	8.53	9.96	

6.1 ⟷ Science & Technology ⟷ 6.3 6.4 ⟷ System Development ⟷ 6.7

HMMWV Technical Issue #3 Reliability/Durability

HMMWV	2014	2015	2016	2017	2018	2019	2020
Program Milestones & Insertion Points							
Active & Potential Investment Opportunities	HMMWV FACT Modeling ($0.50M)						
	TWV Modernization Study ($0.92M)						
D&I	5 Spaceframe Technology ($1.50M)						
E&D							
FNC							
SBIR/STTR	4 Vehicle Agnostic Modularity ($4.03M)					5	
TARDEC							
Other							

Concept to Capability Mapping Alignment Process

Funding Profiles ($M)	FY14	FY15	FY16	FY17	FY18	FY19	FY20
S&T (6.2 / 6.3)	2.00	1.03	0.58	0.49	0.49	0.49	

6.1 ⟷ Science & Technology ⟷ 6.3 6.4 ⟷ System Development ⟷ 6.7