Left: Oshkosh LATV **Center:** AM General BRV-O **Right:** Lockhead Martin JLTV

JOINT LIGHT TACTICAL VEHICLE (JLTV)

Program Description

The JLTV is a major Army-Marine Corps defense acquisition program addressing a new-generation tactical wheeled vehicle to replace a portion of the Services' HMMWV fleet. The program's aim is to develop a new multi-mission light tactical vehicle family with superior crew protection and performance when compared to today's HMMWVs. The JLTV family will balance critical weight and transportability constraints against performance, protection, and payload requirements – all while ensuring an affordable solution for the Army and USMC.

The development of the JLTV reinforces the Services' approach to interoperable platforms that provide expeditionary and protected maneuver capabilities to forces currently supported by HMMWVs. The JLTV will also improve payload efficiency through state-of-the-art chassis engineering, enabling the vehicles to be deployed with the appropriate level of force protection through the use of scalable armor solutions. Expected JLTV fleet reliability and fuel efficiency targets will be significantly greater than the current HMMWV fleet, bringing millions of dollars in savings over the JLTV lifecycle.

Program Status

The JLTV program is currently in the Engineering and Manufacturing Development (EMD) phase. On August 22, 2012, Program Management (PM) JLTV awarded three EMD awards to AM General LLC, Lockheed Martin Corporation, and Oshkosh Corporation. These EMD contracts require each company to deliver 22 full-up prototypes beginning 12 months after contract award, and also specify contractor support to a comprehensive 14-month Government test program, which will include blast testing, automotive testing, and user evaluation.

The Marine Corps plans to acquire 5,500 JLTVs with Full Operational Capability by the end of FY 21.

JLTV'S Top Three Program Technology Issues:

1. Weight/Armor

The JLTV must be transportable by rotary and fixed wing aircraft, as well as aboard amphibious shipping and Maritime Prepositioning Ships. Any additional weight could hinder the vehicle's ability to be transported. Force protection needs will require higher levels of armor protection while still meeting the JLTV's transportability requirement. Therefore, technologies that offer increased protection while maintaining or reducing vehicle weight are critical to the success of the JLTV program.

2. Reliability, Availability, Maintainability, Modeling and Simulation

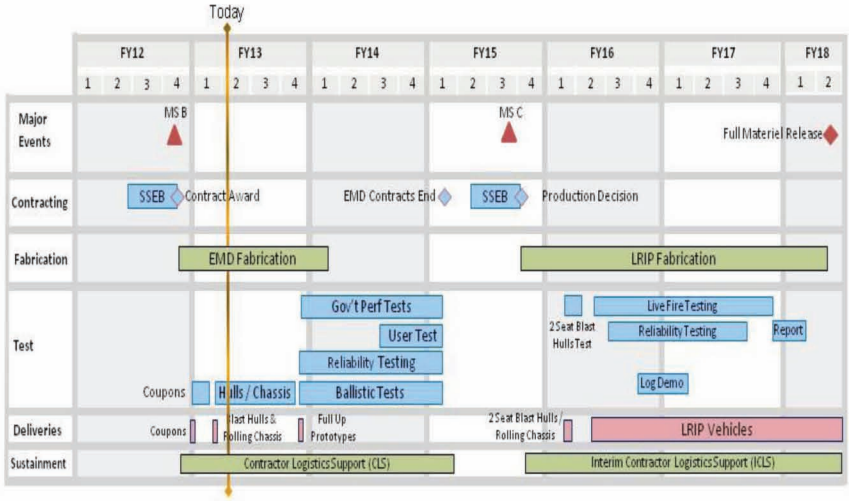
Modeling the reliability of the vehicle is critical to determine if there are maintainability issues.

Therefore, modeling and simulation tools are needed that fully integrate systems engineering principles in the prediction of vehicle reliability that can dramatically reduce the Total Ownership Costs and provide design trade-offs that are traceable, transparent, and consistent.

3. Corrosion Resistance

JLTV will be stored and maintained for long durations in prepositioned stock ashore and at sea, outdoor motor pools, and other areas where it will be exposed to salt air, rain, snow, heat, cold, and other corrosive environments, which must be mitigated in the vehicle design. Damage from corrosion can cause significant maintenance requirements. The U.S. Military is experiencing a decrease of readiness through corrosion of tactical ground and ground support equipment. Corrosion degrades operational and structural capabilities and affects the safety of our operating forces. Therefore, corrosion resistance technologies will reduce Total Ownership Costs and provide a significant increase in equipment readiness.

Joint Light Tactical Vehicle (JLTV)



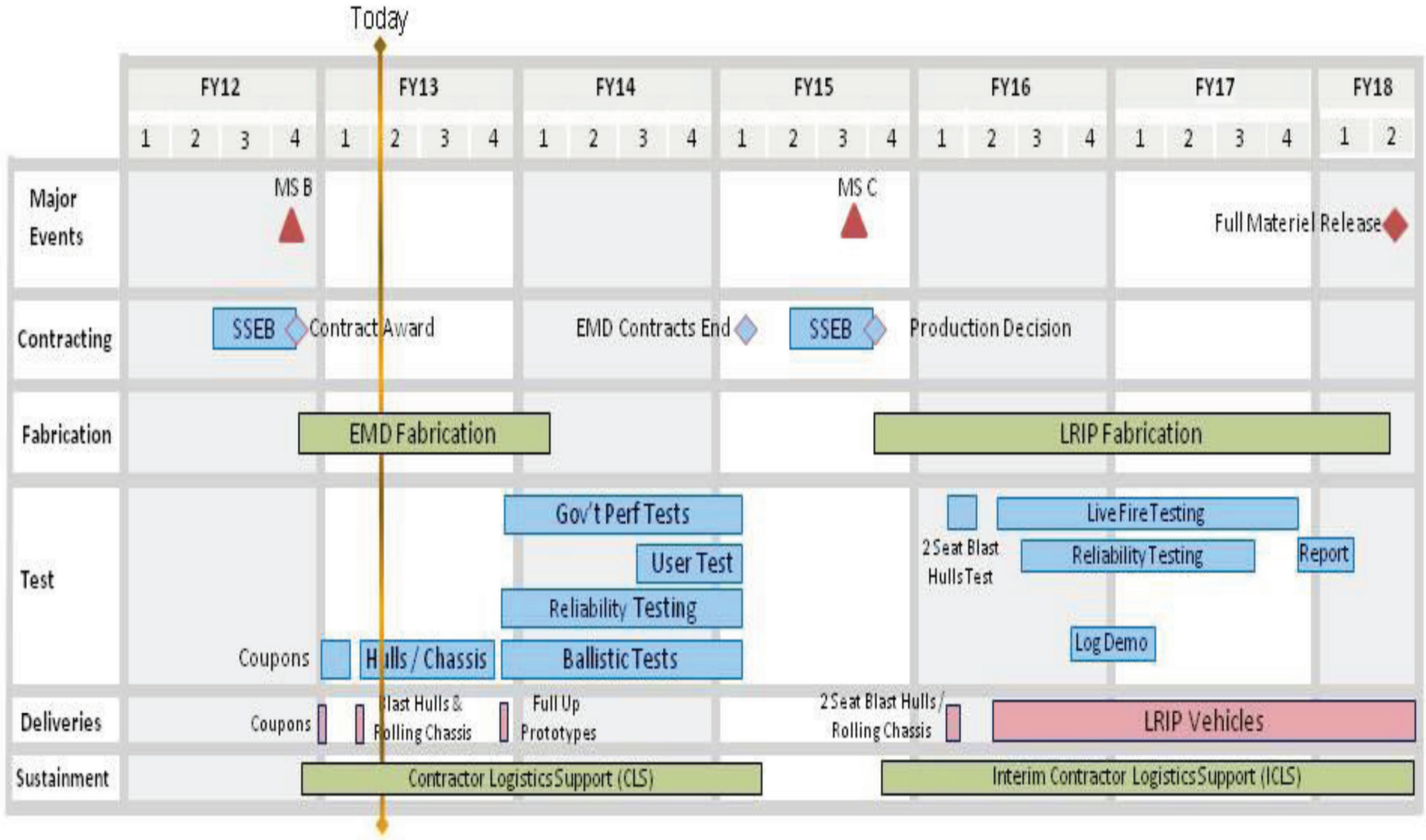
Program Description

- Mission: The Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV) is a Joint Army and Marine Corps program that provides vehicles and companion trailers capable of performing multiple mission roles while providing *protected*, *sustained*, and *networked mobility* for personnel and payloads.
- Description: Marine Corps participation in JLTV focuses on procuring the JLTV for combat mission roles, providing increased survivability, mobility, payload and reliability over the current family of HMMWVs. The initial production of JLTVs will support the operating forces with tactical wheeled vehicles providing a high level of scalable protection, improved sustainment, and net-ready maneuver platforms that are strategically and operationally transportable and tactically mobile across all terrain.

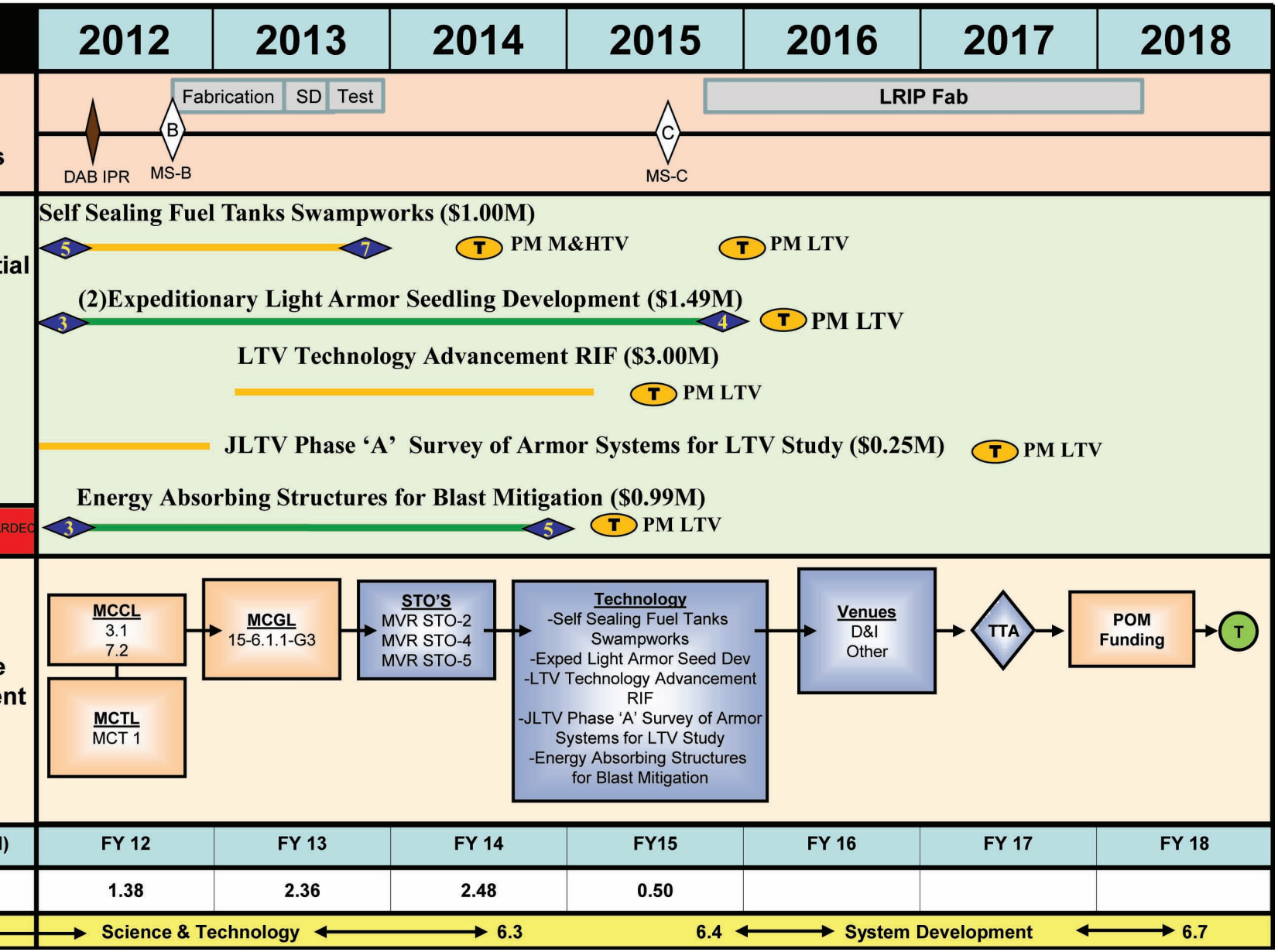
Program Status

- ACAT: ID
- MS B: August 2012
- Next Key Acquisition Event MS C: June 2015
- Contract Type & Approach: FFP
- Government / Industry Performers: Lockheed, Oshkosh, AM Gen
- Next Demonstration / Test Events: Ballistic hull testing scheduled to begin 1 March 2013. EMD Phase testing will start in September 2013
- AAO: 5,500 (Increment I)
- Service Life: 20 Years
- Envisioned Disposal Date: 2038

Joint Light Tactical Vehicle (JLTV)



JLTV Technical Issue #1 Weight/Armor



Funding Profiles ($M)	FY 12	FY 13	FY 14	FY15	FY 16	FY 17	FY 18
S&T (6.2 / 6.3)	1.38	2.36	2.48	0.50			

6.1 ← → Science & Technology ← → 6.3 6.4 ← → System Development ← → 6.7

JLTV Technical Issue #2 Reliability/Affordability/ Maintainability (RAM) Modeling and Simulation (M&S)

JLTV	2012	2013	2014	2015	2016	2017	2018

Program Milestones/ Insertion Points

Fabrication | SD | Test

LRIP Fab

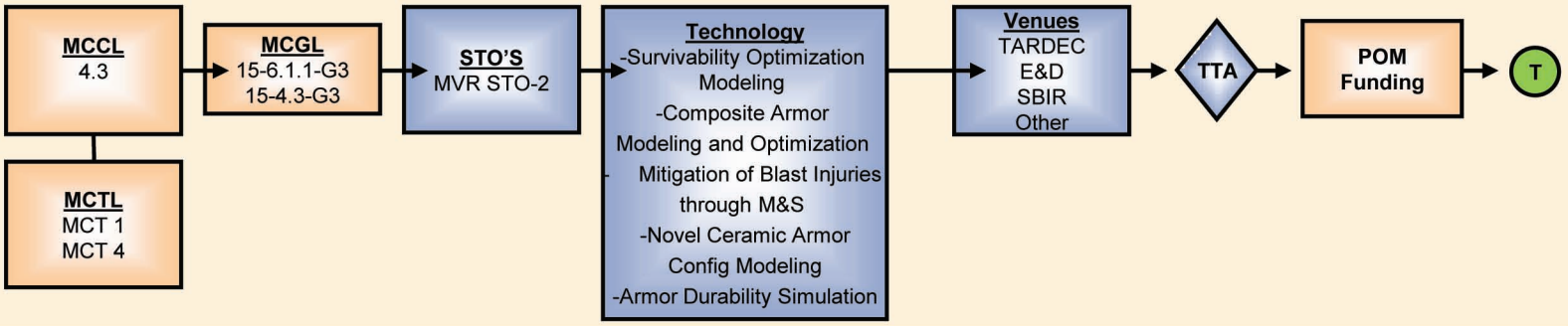
DAB IPR | B MS-B | C MS-C

Active and Potential Investment Opportunities

- Survivability Optimization Modeling (TOSOM) ($5.40M) (4 – 6)
- Composite Armor Modeling and Optimization (CAM) ($2.28M) (6)
- Survivability Analysis of Alternatives Tool ($0.25 M) (3 – 6) T PM LTV
- LTV Technology Advancement RIF ($3.00M) T PM LTV
- Mitigation of Blast Injuries through M&S (PM M&HTV SBIR II) ($1.84M) (6)
- Novel Ceramic Armor Configuration Modeling ($0.55M) (3 – 5)
- Armor Durability Simulation ($8.60M) (4 – 6)

D&I | E&D | FNC | SBIR | Other | TARDEC

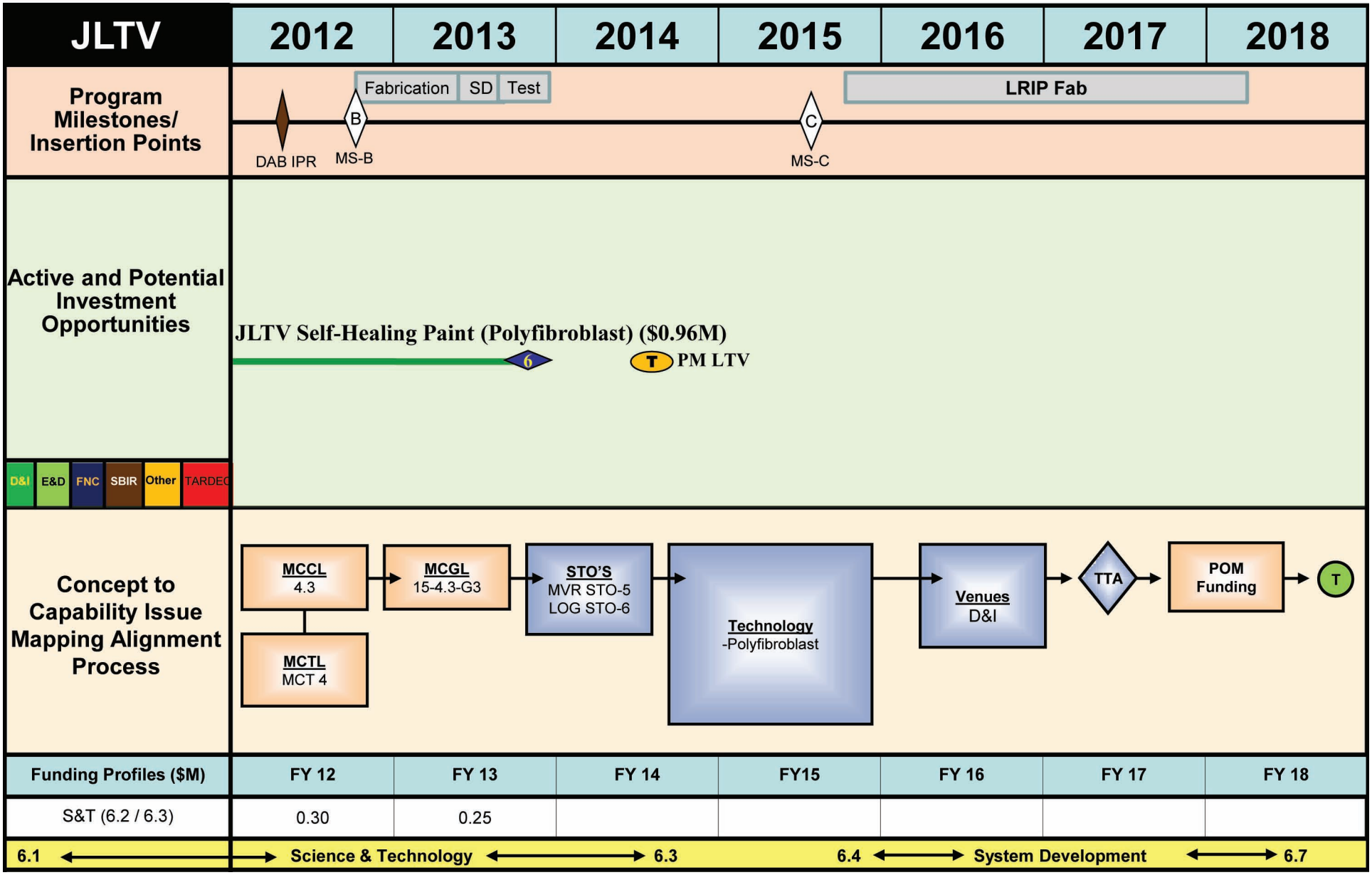
Concept to Capability Issue Mapping Alignment Process



Funding Profiles ($M)	FY 12	FY 13	FY 14	FY15	FY 16	FY 17	FY 18
S&T (6.2 / 6.3)	3.83	5.90	7.25	1.95	0.70	0.70	

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

JLTV Technical Issue #3 Corrosion Resistance



Funding Profiles ($M)	FY 12	FY 13	FY 14	FY15	FY 16	FY 17	FY 18
S&T (6.2 / 6.3)	0.30	0.25					

6.1 ← → Science & Technology ← → 6.3 6.4 ← → System Development ← → 6.7