



Future Tactical Truck System (FTTS) FY04 ACTD Candidate



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**Tactical
Wheeled
Vehicle
Conference**



Problem Statement



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CURRENT TACTICAL WHEELED VEHICLES DO NOT POSSESS THE VERSATILITY (LOAD HANDLING), DEPLOYABILITY (C130 ROLL ON/ ROLL OFF), MAINTAINABILITY (DIAGNOSTICS and PROGNOSTICS), RESPONSIVENESS (FUEL EFFICIENCY and C4ISR) AND SURVIVABILITY (ARMOR) TO SUSTAIN CONTINUOUS OBJECTIVE FORCE OPERATIONS WITH TIMELY, RAPID, AND PULSED DELIVERY OF SUPPLIES



DEPOT

PORT

Truck to Air/Ship

FORT



Air/Sea to
Truck to
TSV/Air

Unit of
Employment

FOB

Unit of
Action

MSS/SRS



POD



The pipeline is too slow and the Army's logistics footprint is too large!





TACTICAL WHEELED VEHICLE VISION

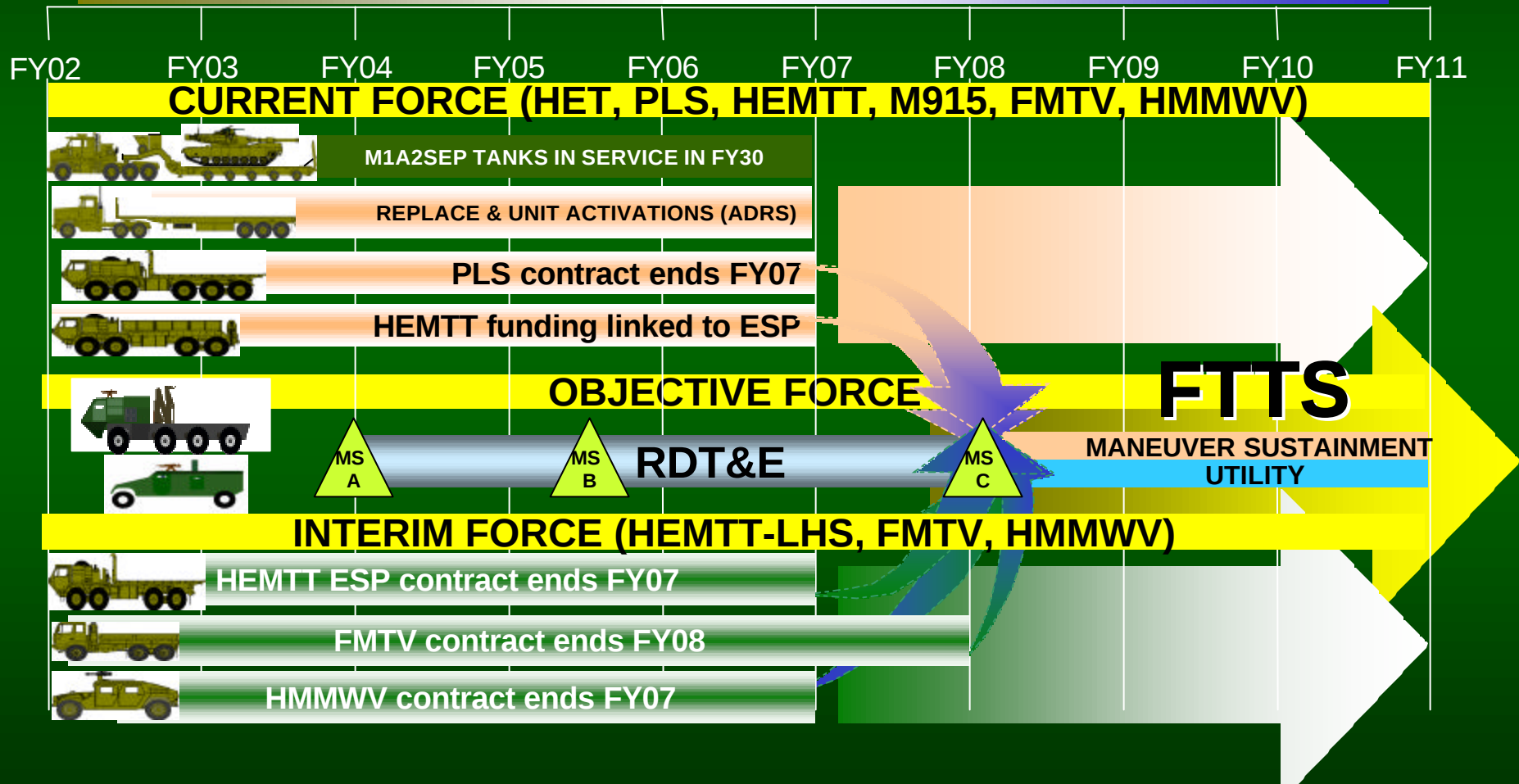
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FY 03

OBJECTIVE

TRANSITION FROM FY03 TO OBJECTIVE FORCE





ACTD Objective

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Med & Heavy Truck
Variants



Load Handling
System



Numerous Material
Handling Equipment



FTTS-MSV



Numerous Delivery
Platforms



Modular Platform



Numerous Interface
Devices



FTTS-UV provides Command and Control and includes a Hybrid propulsion system for increased fuel efficiency and onboard power

**A SEAMLESS Distribution SYSTEM built for the Obj Force
(Applied to the SBCT to evolve the TTPs, CONOPS, and doctrine)**





Basic Concept FTTS Reduces Handling Hours



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What we have today...

	APOE	APOD	FOB	SRS	Total
Time	20.2	7.7	3.9	6.7	38.5
Equipment	48.2	22.7	40.1	200.0	311.0
Personnel	90.5	51.3	40.1	333.0	515.3

Handling Hours

What we need tomorrow!

	APOE	APOD	FOB	SRS	Total
Time	8.1	6.3	1.1	2.4	17.9
Equipment	22.7	11.0	15.2	48.0	96.8
Personnel	53.0	35.0	15.2	48.0	151.2

Type of Demonstration

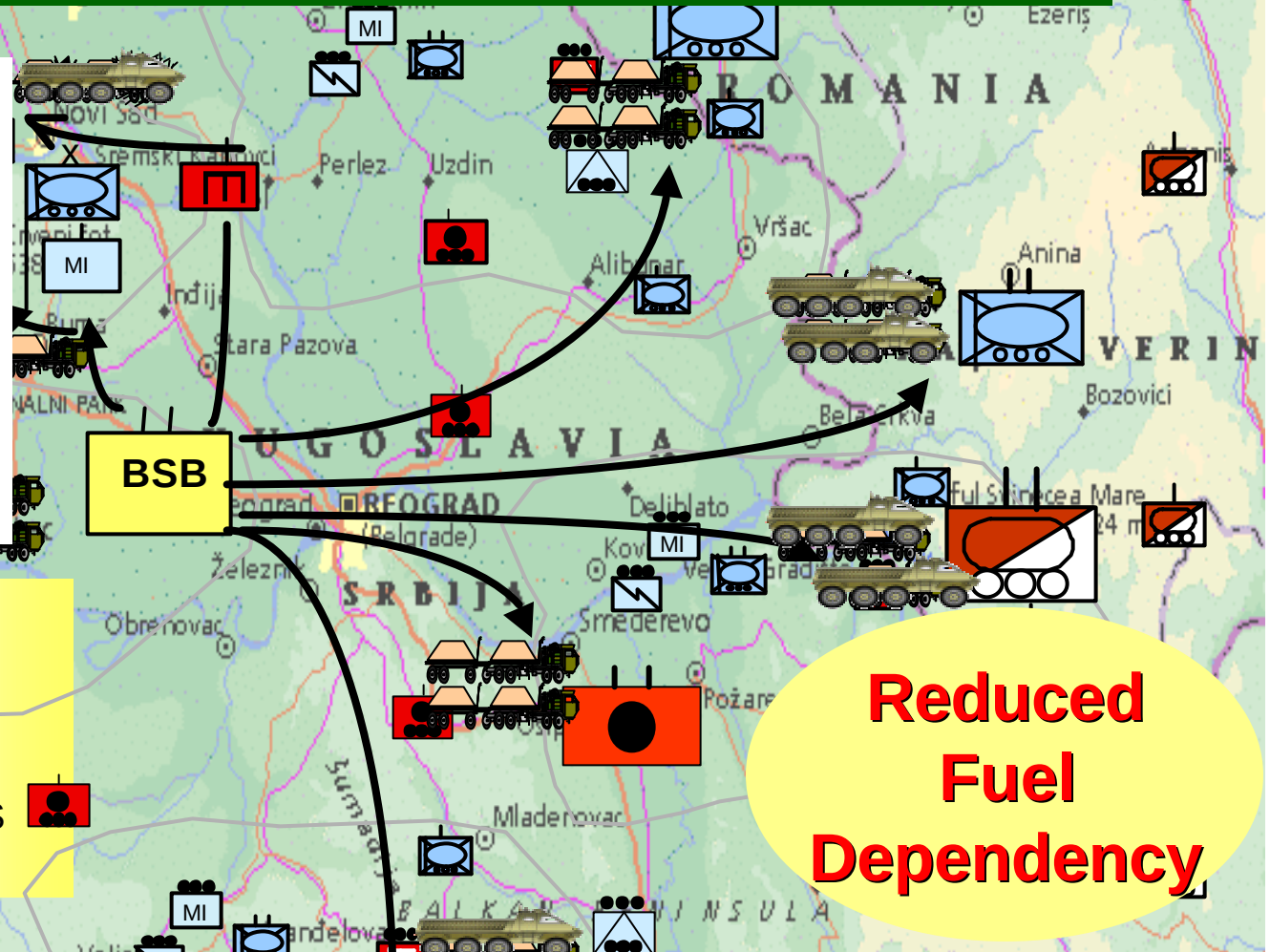
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SBCT Transportation Platoon:

- Provides lift capability for the movement of all classes of supply
- Delivers sustainment supplies to the SBCT down to the battalion level.
- Capable of transporting up to 308 STONS on CROPS in a single lift.

TRANS PLT REQUIREMENT

- 8 DROP POINTS (BDP)
- 24 CROP
- 31 SOLDIERS (1-0-30)
- SIMULTANEOUS DELIVERIES
- 14 HEMTT-LHS



Objective: Replace 7 HEMTT LHS with 7 FTTS-MSV and 2 HMMWVs with 2 FTTS-UV in a surrogate SBCT Trans Squad to prove a seamless distribution system that has a reduced logistics footprint and reduced fuel dependency that will support the Objective Force



FCS Technology Base Programs Leveraged for FTTS

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TACOM-ARDEC



Vehicle Alignment System
Intermodal Flatrack
Intelligent Load Handling System
Smart Tie Down
Pre-Configured Packaging
Robotic Trailer
(III.GC.2000.04-Autonomous Follower ATD)

**60% Reduction in
Resupply Time**

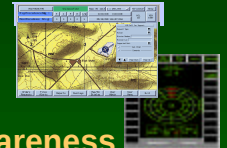


**100% in
Situational
Awareness**



TACOM-TARDEC

Advanced Crew Station
Integrated C4ISR
Enhanced Situational Awareness
(III.GC.1999.02 Crew integration and Automation Test Bed)



Embedded Diagnostics/Prognostics
Embedded Training and Simulation
Automated Maintenance



**25% or
greater
Mobility**



**Zero unscheduled
Maint. actions**

Active Suspension
Advanced Propulsion
(IV.GC.1999.01 Combat Hybrid Power Systems/ III.GC.1996.01 Ground Propulsion and Mobility)

**18% more
survivable**



**100 % increase in
Fuel efficiency**

Modular Armor
Objective Crew Served Weapon
Transparent Armor
NBC Overpressure
Mine Blast protection

(IV.GC.2000.02 Ballistic Protection for FCS/ IV.gc.2001.01 Signature Mgt for FCS/ III.GC.1999.01 Full Spectrum Active Protection)

On-board Power Generation
On-board Water Generation





Threshold Capabilities

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Sustainability

- Reliability – MTBF > duration of Pulsed Operations
- Maintainability – Self-reporting, no special tools, No TMDE, and No Spares

Agility

- Higher Mobility Rated Speed: 50 % increase
- Must be able to go where FCS goes and bypass built up Areas to deliver support

Deployability

- C130 Roll on/Roll off w/load
- Ready to support off the ramp Without vehicle preparation or Transportability waivers

Lethality

Versatility

- Advanced Load Handling
- Interchangeable/Intermodal Operation
- On Board Power & water Generation
- Deliver integrated, common, formed Packaging

Responsiveness

- Greater Fuel Efficiency 100 - 200 %
- Dynamic Movement Tracking and Re-routing
- Greater Range 600 – 900 miles
- Integrated C4ISR

Survivability

- Designed upfront to provide time definite and assured delivery
- Reduced Emissions and Signature

ORD Starting Point



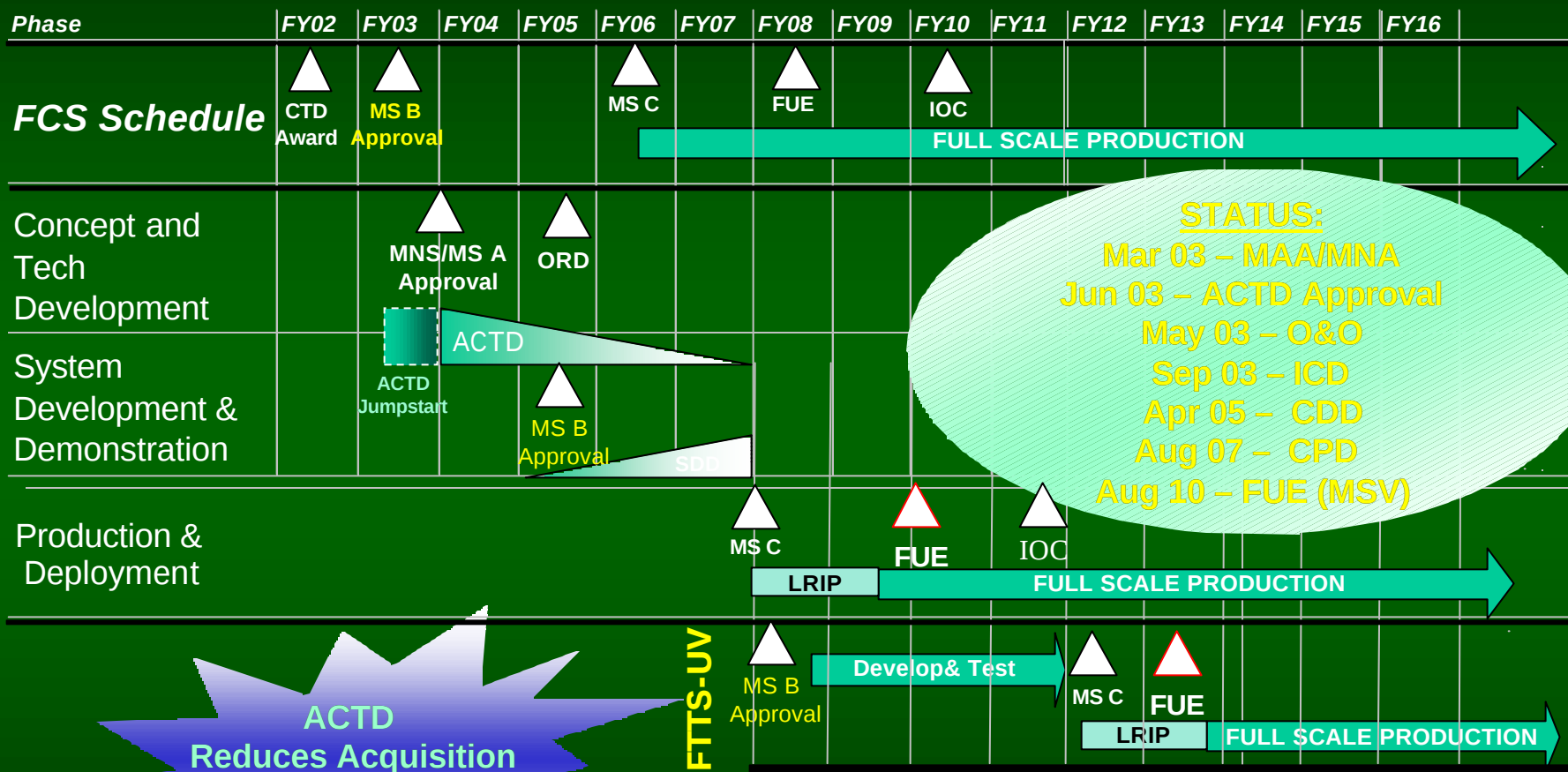


Transition Schedule

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FTTS-MSV



STATUS:
 Mar 03 – MAA/MNA
 Jun 03 – ACTD Approval
 May 03 – O&O
 Sep 03 – ICD
 Apr 05 – CDD
 Aug 07 – CPD
 Aug 10 – FUE (MSV)

ACTD
Reduces Acquisition
Risk for the
PM

FTTS-UV

▲ FTTS-MSV FUE FY10 is 2 years behind FCS FUE FY08
 ▲ FTTS-UV FUE FY13 is 5 years behind FCS FUE FY08

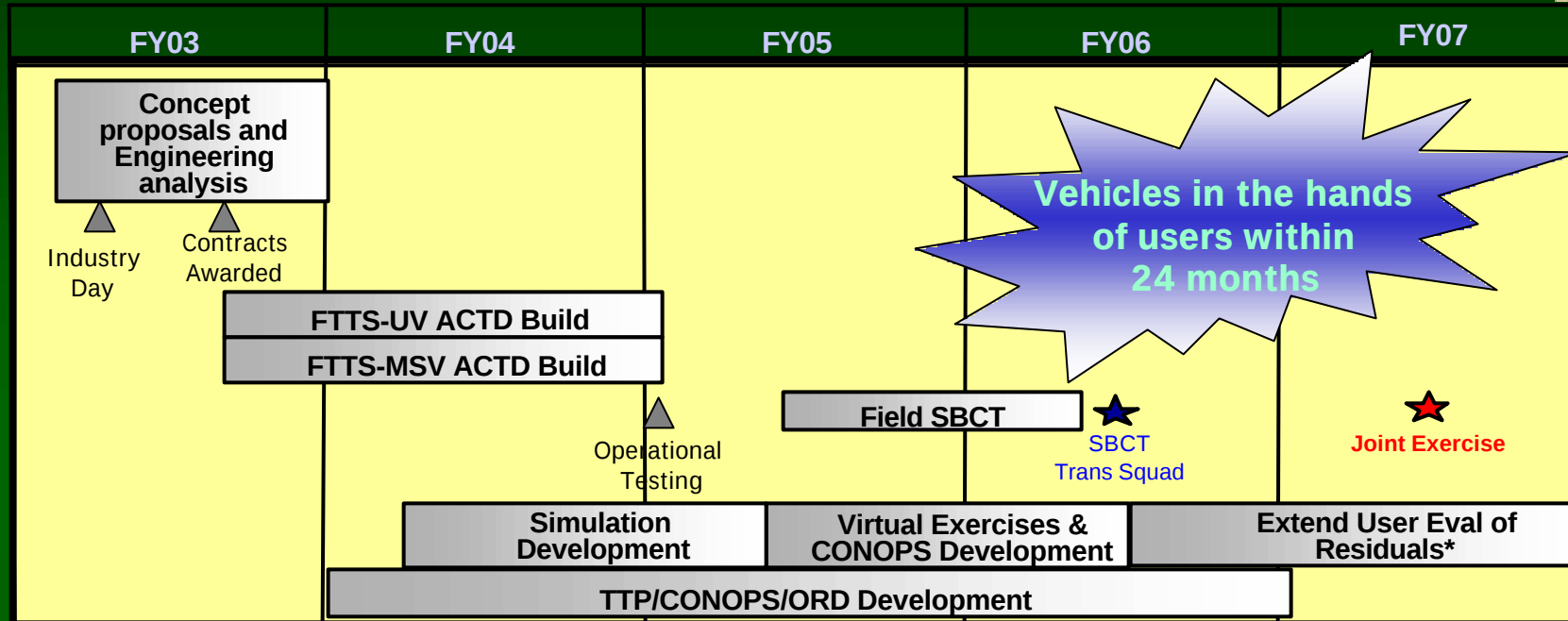
FTTS Procurement Funds Begin in FY08





Schedule

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Residuals

MSV (7 Vehicles)

- INTEGRATE TECHNOLOGIES
 - ACTIVE/REACTIVE SUSPENSION
 - ALL WHEEL STEER
 - HYBRID (ON-BOARD POWER)
 - POWER/ENERGY MANAGEMENT & DISTRIBUTION
 - ADVANCED LOAD HANDLING
 - EMBEDDED DIAGNOSTICS
 - C4ISR
 - ARMOR (7.62 & MINE PROTECTION)

UV (2+ Vehicles)

- INTEGRATE TECHNOLOGIES
 - ACTIVE / REACTIVE SUSPENSION
 - ALL WHEEL STEER
 - POWER/ENERGY MANAGEMENT & DISTRIBUTION
 - HYBRID (ON-BOARD POWER)
 - EMBEDDED DIAGNOSTICS
 - C4ISR
 - ARMOR (7.62 & MINE PROTECTION)



Proposed Future Tactical Truck System (FTTS) ACTD Candidate

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ARMY

Lead Service



USMC



USAF

FTTS-MSV FTTS-UV



COCOM Sponsor
(PACOM)



CASCOM
Requirements
Integrator
Deputy Operations
Manager



PM Heavy Tactical Vehicles
Transition Manager



TACOM - TARDEC
TACOM - ARDEC
Technical Managers





Warfighter Payoffs

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- Reduced logistics footprint
- Reduced dependency on fuel
- Provide a “near term” operational solution.
- Examine FTTS technology in context of the emerging operational Concept.
 - Bring a new dimension of multi-mission utility to Army TWV.
 - Provide Operational Reach, Tactical Flexibility, and Sustainment.
 - Examine FTTS role in supporting Deployment, Employment, Sustainment and Redeployment of Combat unit sets.
- “Stepping stone” to advanced structure and Hybrid technologies integrated with advanced communications technology.