



# CANADIAN ARMY SUPPORT VEHICLES

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6 Feb 2012



## Agenda

- Canadian Army Support fleets
- Medium Support Vehicle System      MSVS
- Logistics Vehicle Modernization      LVM
- Enhanced Recovery Capability      ERC

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## Canadian Army Support fleets

### LUVW MiLCOTS

MiLCOTS fleet of 1061 veh  
Training  
Procured in 2003



**2010 Obsolescent**  
**Replacement planned**

### LUVW SMP

Fleet of 1159 vehicles  
Life until 2020  
Limited protection  
Procured in 2004-2006  
15% disposed to date



**2020**  
**Replacement planned**

### LSVW

Fleet of 2800 vehicles  
Insufficient protection  
Limited deployability



**2015 (Self Divestment)**  
**To be replaced by LVM**

### MLVW

Fleet of 2760 vehicles  
End-of-life  
Insufficient protection  
Limited deployability  
M35 Cdn



**2008 (Obsolete)**  
**Being replaced by MSVS**



# Canadian Army Support fleets

**HLVW Recovery**

**Life extended**

**Limited protection**

**Limited capability**

**Obsolescent**

**Being replaced by ERC**



**HLVW**

**Fleet of 1200 vehicles**

**Life-extended until 2019/20**

**Insufficient armour protection**

**Heavy Workhorse (10T/16T)**

**Obsolescent**

**To be replaced by LVM**

**HESV**

**MILCOTS fleet (59 vehicles)**

**Engineer Units**

**Life extended until 2019**

**Obsolescent**

**To be replaced by LVM**



**AHSVS**

**UOR fleet of 97 trucks**

**Afghanistan**

**Good protection**

**Life expectancy 2019**

**Combine with LVM**



# Medium Support Vehicle System - MSVS

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# MSVS Scope

**Standard Military Pattern Vehicles (SMP) – up to (1537)**



**SMP Load Handling System Trailers (LHS) – up to (302)**



**SMP Armour Protection System - up to (157)**



RFP closes  
25 Apr 2012

**Militarized Commercial Pattern Vehicles (MilCOTS) – (1300)**

Options exercised to meet CFDS



Delivered

**Specially Equipped Vehicles Kits (SEV) - (1040)**

895 Baseline shelter



Under contract

**Kitting** for 868 shelters

RFP closes 29<sub>6</sub>  
Jan

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# MiCOTS

895



Configuration: A - Extended Cab - (21' Cargo w/Seat &Tarp)

128



Configuration: B - Extended Cab - (21' Cargo w/Cage)

32



Configuration: C - Extended Cab - (16' Deck w/ Cargo Crane)

100



Configuration: D - Extended Cab - (21' Flatbed)

Fielding  
Spring  
2012

94



Configuration: E - 9 Man Cab - (13'Artillery w/ Tarp)

51 SEV  
being  
kitted



Configuration: F - 9 Man Cab - (10' Deck w/Auger)

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## Op Lama, Lotus and Lustre



Newfoundland Hurricane



Richelieu River Floods



Brandon area Floods



Richelieu River Floods



En route for Richelieu River



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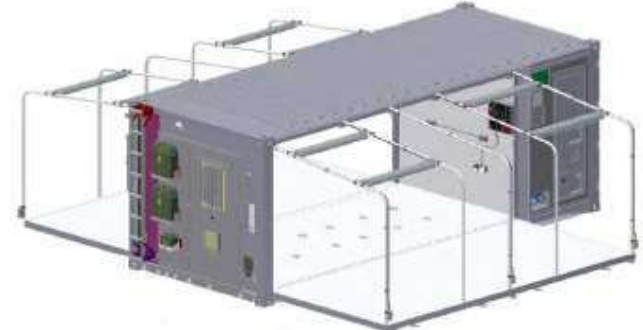


# Baseline shelter Variants

Variant 1 = 20 ft shelter w/mechanical rm



Variant 4 = 20 ft shelter 2 side expandable w/mechanical rm



Variant 2 = 10 ft shelter w/mechanical rm



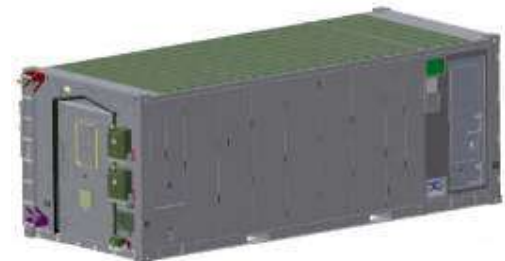
Variant 5 = 20 ft shelter wo/mechanical rm



Variant 3 = 20 ft shelter 1 side expandable w/mechanical rm



Variant 6 = 20 ft shelter w/mechanical rm W/ enhanced AC





# Logistics Vehicle Modernization



## Logistics Vehicle Modernization

- LVM is Part of the Canada First Defence Strategy (CFDS), promulgated by Government of Canada in 2008
- It is a Capability replacement project created in 2008
- LVM Project Identification in 2010
- LVM Preliminary Project Approval (PPA) planned for Spring 2013

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Scope

- The Logistics Vehicle Modernization project will replace the in service Light and Heavy logistic vehicle fleets' capabilities.

Note: All ELEs are TBC

### Existing fleets



LVM Light



MSVS MilCOTS

MSVS SMP Mandatory/Desirable Payload



LVM Heavy

### New fleets



# Combat Logistics Support Vehicle (CLSV)

- SEV Direction: The same shelter system will fit on both CLSV SMP and MilCOTS
  - Variants: Min:5 Max:59 (including ambulance, cargo, office/command post)
- Expeditionary (SMP)
  - Protected
  - Non-Protected
  - JP 8 Fuel
  - 2.2-3.5 Tonnes
  - Improved medium mobility
  - C-130
- Domestic Trucks (MilCOTS)
  - 2.2-3.5 Tonnes
  - Medium mobility
  - Rail transportation



## Heavy truck requirements

- 16 Tonnes
- Variants
  - Cargo w/crane
  - Tractor
  - PLS
  - Cargo
- **Protection level**
  - Ready to accept STANAG Level 3 Ballistic
  - Level 2A/2B Blast (TBC)
  - **Expeditionary Fleet must have the capacity to be protected**
- **MilCOTS requirement to be validated**



## Enhanced Recovery Capability - ERC



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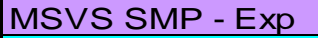

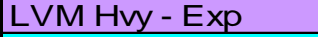








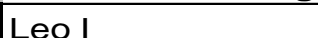
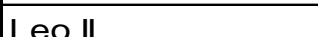
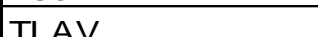
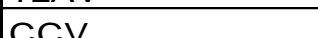


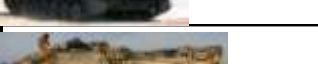



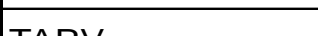


## Enhanced Recovery Capability: Capability Deficiency

- Requirement for suitable resources to recover and backload disabled and immobilized vehicles expediently
- Significant problem that will grow exponentially in the next few years





| Wrecker (Towing) Capability Gap   |                |       | Timeline - 20..   |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|----------------|-------|---|----|----|-------|----|--|----|-----|-----|----|---|----|----|-----|----|-----|----|----|----|----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Casualties  | Wreckers       | Qty   | 11  | 12 | 13 | 14    | 15 | 16   | 17 | 18  | 19  | 20 | 21  | 22 | 23 | 24  | 25 | 26  | 27 | 28 | 29 | 30 |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                | 1300  | Yellow  |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                | 1500  |   |    |    | Green |    |  |    | Red |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                |       |   |    |    | Red   |    |  |    |     |     |    |   |    |    | Red |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                | 500   |   |    |    |       |    | Green  |    |     | Red |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                |       |   |    |    |       |    | Red  |    |     |     |    |   |    |    |     |    | Red |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                | 1500  |   |    |    |       |    | Green  |    |     | Red |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                |       |   |    |    |       |    | HLVW Wrecker   |    |     |     |    |   |    |    |     |    | Red |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                | 4800  |   |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    | AHSVS Wrecker  | 7     | High-use commercial truck, end-life 2018                                      |    |    |       |    |  |    |     |     |    | Possible life-extension - limited quantity  |    |    |     |    |     |    |    |    |    | Red |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    | HLVW Wrecker   | 123   | Borderline to be used for the medium truck; Too small for future heavy trucks |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    | HLVW Tractor   | 46    | Used with a FWTRD for towing  |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    | Future Wrecker | 104   |   |    |    |       |    |  |    |     |     |    | Recommend procuring thru ERC instead of LVM |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Tracked Fighting Vehicles</b>  |                |       | 11  | 12 | 13 | 14    | 15 | 16   | 17 | 18  | 19  | 20 | 21  | 22 | 23 | 24  | 25 | 26  | 27 | 28 | 29 | 30 |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                | 67    | To be Divested  |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                | 82    | Rely on two Leo II ARVs on loan, then 8-12 future Leo II ARVs                 |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                |       | Use MTRV  |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                | 108   |   |    |    |       |    | No Recovery Plan   |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|    |                | 149++ |   |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | Leo I ARV      | 8     | To be divested  |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Leo II ARV     | 8     |   |    |    |       |    | Sufficient quantities for the Leo II tanks only, 8-12 to be procured |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | MTRV           | 23    | Tow and recover the TLAV  |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Wheeled Fighting Vehicles</b>  |                |       |   |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |                | 650   | No Recovery Plan  |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |                | 500   |   |    |    |       |    | No Recovery Plan   |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |                | 1150+ |   |    |    |       |    |  |    |     |     |    |   |    |    |     |    |     |    |    |    |    |     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

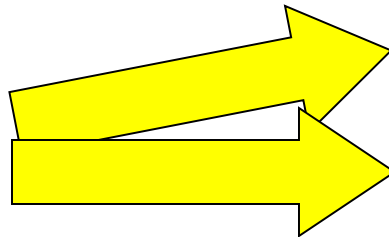


# Future Recovery Plan

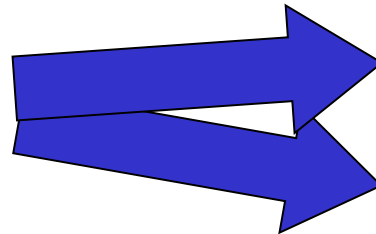
## Recovery Vehicle



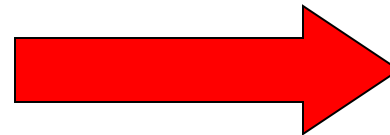
Leo ARV



? ERC



?ERC



## Primary Casualty

Tanks



CCV Tracked



LAV 3 /CCV (W)



TAPV



B Vehs (MSVS, LVM)  
Complex Recovery





# Fifth Wheel Towing and Recovery Device (FWTRD)





## Fifth Wheel Towing and Recovery Device

- Attachment to a tractor 5<sup>th</sup> wheel that turns a tractor into a wrecker
- Qty 40 to be procured as a stop gap measure
- ERC will have to integrate/refurbish/dispose once final solution is fielded





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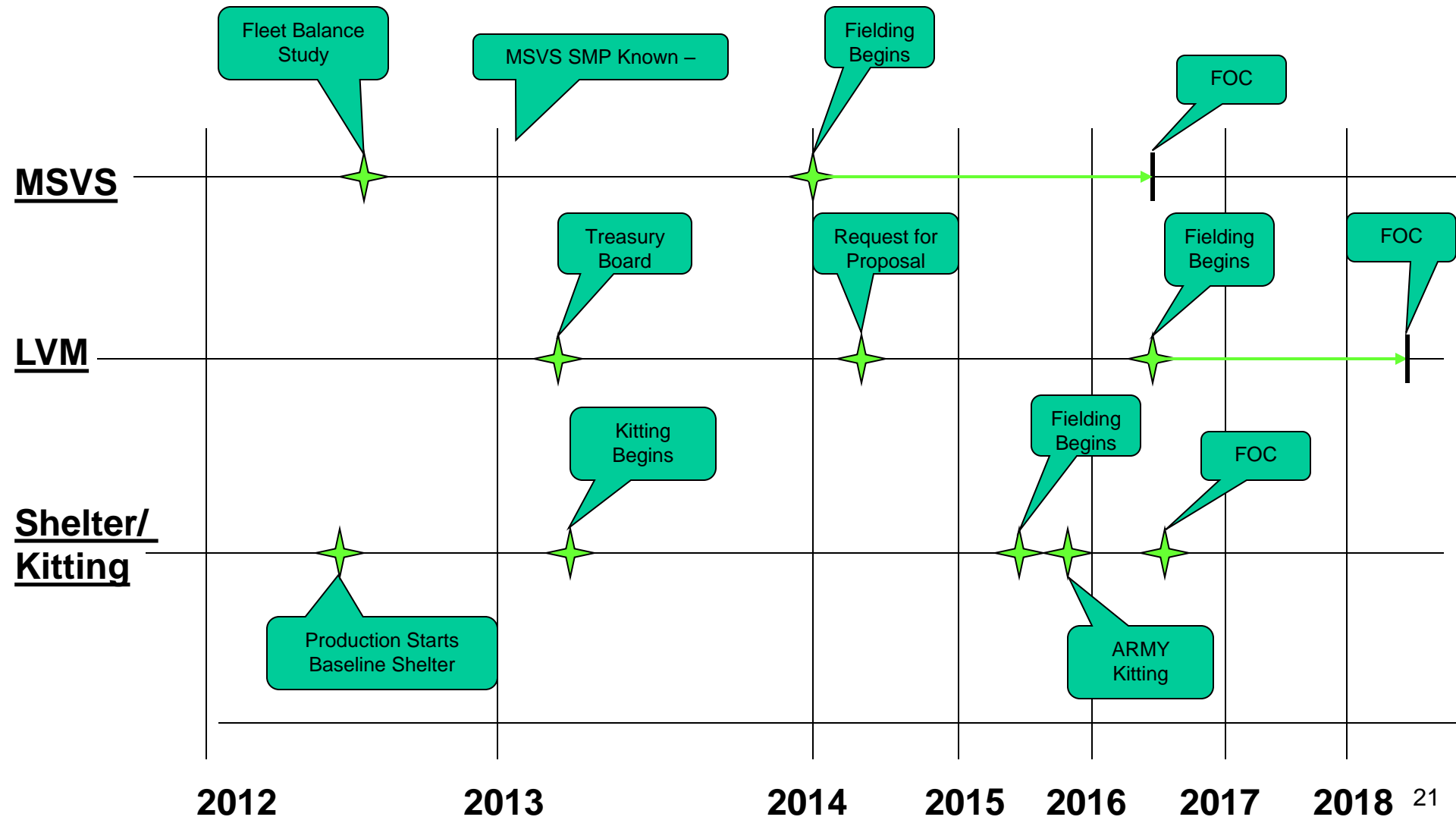
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# TIMELINE



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## Faster Project Management

