Integrated Soldier Systems
INDUSTRY FORUM

Director General Integrated Soldier Systems
BRIG David Smith
1. Integrated Soldier Systems Branch outlook
2. ‘State of the Nation’ and open forum
3. Major Emergent Work
4. Expo
Integrated Soldier Systems Branch (ISSB) acquires and sustains soldier combat equipment – delivered and maintained as a capability system, incorporating the latest technology innovations – to ensure ADF war fighters complete their mission successfully and return home safely.
Priorities
• Increase cradle to grave capability management through prime vendor arrangements
• Improve inventory management
• Improve the supply chain
• Manage customer relationships and Ministerial expectations
• Up-skill the workforce

ISSB comprises **six business units**:  
• Clothing Systems Program Office  
• Armaments Systems Program Office  
• Soldier Modernisation Systems Program Office  
• Health Systems Program Office  
• Simulation Directorate  
• Diggerworks

The **scope of ISSB business** includes:
• Current approved project value $1.371b  
• Inventory value $506m  
• Monthly demands $95,000  
• Items of supply (NSNs) $62,000  
• Suppliers $180  
• Contracts 60  
• Technical documents 5,000  
• Full Design Acceptances 1,500  
• Provisional Design Acceptances 68  
• Active RODUMS 105  
• Safety RODUMS 7

**Resources (organic positions)**  
• Civilian 198 FTE  
• Military 43 AFS

**Resources (assigned positions)**
• Engineering 106 FTE / 27 AFS  
• Contracting 7 FTE  
• Financial 11 FTE
INTEGRATED
SOLDIER SYSTEMS
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OPEN FORUM

Questions ?
INTEGRATED
SOLDIER SYSTEMS
At the heart of all Army capabilities is the Australian soldier: they must outthink, outlast and outperform their adversary.
Modernisation makes the combined arms team **scalable** – from responsive and agile to robust and protected.

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Army Modernisation Programs

Combat Effects provided to the SCS

- SA: Situational Awareness
- L: Lethality
- S: Survivability
- M: Mobility
- SU: Sustainability

- Combat Support: Artillery, Combat Engineers, Ground Based Air Defence
- Armoured Fighting Vehicles
- Land C3: Command Control & Communication
- Special Operations
- Land ISREW: Intelligence, Surveillance, Reconnaissance & Electronic Warfare
- Soldier Combat System
- Joint Fires
- Joint Mobility
- Combat Service Support
- Army Aviation
- Land Mobility Systems
**Soldier Combat System**

**SITUATIONAL AWARENESS**
- L125-4 Integrated Soldier System
- L53-2 and 4110 Next Gen NFE
- L200 T200-3 Land C3

**LETHALITY**
- L125-4 Integrated Soldier System
- L53-2 and 4110 Next Gen NFE

**MOBILITY**
- L125-4 Integrated Soldier System
- L53-2 and 4110 Next Gen NFE

**SURVIVABILITY**
- L125-4 Integrated Soldier System
- Land Training Areas and Ranges Initiatives

**SUSTAINABILITY**
- L125-4 Integrated Soldier System
- L159 Small Arms Replacement
- L4108 Heavy Weapons Replacement

**TRAINING & EDUCATION**
- L125-4 Integrated Soldier System
- Land Training Areas and Ranges Initiatives

_Present 2030_
## LAND 125 Phase 4 Scope and Tranches

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<td>Refresh - Nano Unmanned Aerial Vehicles (UAVs)</td>
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<td>Enhance Load carriage optimisation tool</td>
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### Legend
- **Enhance**
- **Refresh**
- **Augment**
- **Ongoing**
- **One off**

### Key Terms
- **Legend**
- **Enhance**
- **Refresh**
- **Augment**
- **Ongoing**
- **One off**
• Hand-to-Hand-Fighting Weapon System
• Grenades
• Personal Defence Weapons (e.g. Pistol)
• Assault Rifles
• Shotguns
• Machine Guns
  – Light,
  – Medium and
  – Heavy
• Short Range DFSW
• Medium Range DFSW
• Long Range DFSW
• Sniper Weapons
  – Medium Range
  – Long Range
  – Anti-material
• Light Weight Mortar
• Light Weight Automatic Grenade Launcher
• Command Detonated Munitions
• Remote Weapon Systems
• Loitering Munitions
• Less than lethal capability
• Method of Entry Capability

Up to 21 weapon systems that require integration of:

➢ The Soldier Combat System
➢ Battle Management System
➢ Combined Arms Fighting System vehicles
➢ Allies and Coalition partners
➢ Training and Target Systems
  ➢ Live Firing
  ➢ Simulation
➢ Defence and Industry Support Chain
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<td>Machine Gun Weapon System PM</td>
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<td>Direct Fire Support Weapon System PM</td>
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<td>Light Weight Mortar</td>
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<td>Light Weight AGL</td>
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<td>Munitions PM (LEO SPO)</td>
<td>Less than Lethal Munitions</td>
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<td>Grenades</td>
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<td>Loitering Munitions</td>
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LAND 53 Phase 1BR – Night Fighting Equipment Tranche 2 (Emerging Technology)

- To enhance or supplement the equipment delivered under LAND 53 Phase 1BR Tranche 1 (night vision binocular and laser aiming devices).
- Emerging technology will provide multi-spectral capability to the dismounted combatant, and must be technically mature and able to be supported in Australia from 2020.
- Primary focus is Combat Ready Brigades and Special Forces.
- Budget is approximately $AUD 220m.

Key timings:
- Project Execution Strategy: Feb 18
- Invitation to register interest: Mar 18
- Limited tender: Oct 18
- Evaluation and negotiation: Feb – Nov 19
- Submission to Government: Dec 19 – May 20
- Acquisition / Intro to service: From May 2020
• Hand-to-Hand-Fighting Weapon System
• Grenades
• Personal Defence Weapons (eg. Pistol)
• Assault rifles
• Shotguns
• Machine guns – light, medium and heavy
• DFSW – short, medium and long range
• Sniper weapons – medium range, long range and anti-material
• Light weight mortar
• Light weight Automatic Grenade Launcher
• Command detonated munitions
• Remote Weapon Systems
• Loitering munitions
• Less than lethal capability
• Method of entry capability

Up to 21 weapon systems that require integration of:

• The Soldier Combat System
• Battle Management System
• Combined Arms Fighting System vehicles
• Allies and Coalition partners
• Training and Target Systems
  • Live firing
  • Simulation
• Defence and industry support chain
LAND 159 Small Arms Replacement
LAND 4108 Direct Fire Support Weapons Replacement

Gate 0: Now
Gate 1: 2019
Gate 2: 2022

Towards: 2027
Tranche 3 Deliveries Commence

Establish New Supplier Engagement Model
Detailed Evaluation
• Commercial,
• Technical,
• Integration and
• User Assessment

Release RFI 2
Release RFI 1
2023
2024
2025
2026
2027

Tranche 1 Deliveries Commence
Tranche 2 Deliveries Commence

LAND 159 Small Arms Replacement
LAND 4108 Direct Fire Support Weapons Replacement
The Program seeks to maximise opportunities for Australian Industry.

A market analysis is being conducted.

Initial industry briefing today.

RFI will be released through AUSTENDER by the end of November 2017, seeking views from industry to shape the Acquisition and Support strategy.

2-3 page responses encouraged.
Paul Grant
Director Soldier Modernisation Systems Program Office
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LAND 125 Phase 4
LAND 1508 Phase 1
LAND 125 Phase 4 – Integrated Soldier System

• Will deliver equipment and training solutions to the ADF that is iteratively improved and progressively integrated to keep pace with emerging threats and disruptive technological changes in the operational environment.

• Delivery of 3 tranches over 13 years.

• 14 separate Soldier Combat System capabilities.

**Schedule**

• Gate 1 NSC - March 2018

• Gate 2 NSC - June 2019
Capability Elements delivery in Tranches

**FY19/20 to FY22/23**
- **Tranche 1**
  - Enhance - Soldier Combat Ensemble
  - Refresh - Field equipment
  - Augment - Live instrumentation systems for large exercises
  - Enhance - Initial Targetry upgrades

**FY23/24 to FY26/27**
- **Tranche 2**
  - Enhance - Soldier Combat Ensemble
  - Refresh - Field equipment
  - Governance - whole of system design and management
  - Augment - Handheld translators
  - Enhance - Mechanical load carriage systems
  - Refresh - Nano Unmanned Aerial Vehicles (UAVs)

**FY27/28 to FY31/32**
- **Tranche 3**
  - Enhance - Soldier Combat Ensemble
  - Refresh - Field equipment
  - Enhance - Immersive simulation at small team level
  - Enhance - Individual soldier Power Management
  - Enhance - Passive signature management
  - Enhance - Health and Performance Monitoring

**Legend**
- Ongoing acquisition
- One off acquisition
Future Tenders (pending Gate 1 approval March 2018)

Field Equipment (Prime Vendor)

- Tender release Q2 2018 for first delivery Q1 2020
  - Three Work Packages (WP)
    - **WP1** – Establishment of Prime Vendor and supply of initial Field Equipment items (19 types) including:
      - Individual Artificial Illumination System
      - Urban Breaching System
      - Individual Sleeping System
      - Individual Emergency Water Purification
    - **WP2** – Additional Field Equipment (across 11 categories) through Tranches 2 & 3 including: personal protective equipment, storage and load carriage, cooking and drinking equipment.
    - **WP3** – Supply and support of Adventure Training Equipment.
Next Generation Soldier Combat Ensemble (Prime Vendor)

- Tender release 2020 for Tranche 2 delivery in 2023
- Includes all current 5 elements:
  - Ballistic Protection
  - Load Carriage (includes packs)
  - Combat Helmets
  - Combat Hearing protection
  - Ballistic and Laser Ocular Protective System (BLOPS)

Note: Tranche 1 will be procured using extent contracts
Special Operations
SO Capability Enhancements and Continuous Improvement

- Retire Risk
- Close Gaps
- Pursue Opportunities
  - Innovation
  - Research and development
  - Science and Technology Studies
- Focused on the Force-in-being
- Will adapt to inform the Planned and Future Force
Special Operations

- Industry opportunities
  - SME will have opportunity to contribute especially in innovative areas
    - We will engage through
      - innovation hub
      - Industry days
- There may be times when international partner interoperability will have primacy
- Our vision is to consult with industry early in product acquisition planning
Approach

• Proposing to Government a 20 year ‘Rolling Program’ acquisition approach to provide agility and responsiveness
• Low complexity acquisitions early to allow the program to mature around the strategic plan

Schedule

• Gate 1 Investment Committee – March 2018
• Gate 1 NSC – June 2018
• Gate 2 NSC – July 2019

Delivery

• Expected to ramp up post Gate 2, currently scheduled FY 2019-20
SO Major Systems Broad Scope

- Combat & Tactical Manoeuvre (Wpns/Target Acq/SCE/Tac Mob)
- C4ISREW (Comms/Info Sys & Networks/EW/Targeting/Exploit)
- Force Projection (Air & Maritime Tac/Air Land Sea Op & Strat)
- Force Protection (Sense/Protect/Exploit/Restore)
- Combat Service Support (Maint/Trans/Supply/Health)
- Human Performance (Resilience/Nutrition/Hydration/Fitness)

Indicative Scope Tranche 1: (Security Classified)

- Commercial Automotive
- Information, Communication Technology
- Weapons and Optics
- Maritime (Small Boats)
- K9 (Military Working Dogs)
- Mountaineering and Climbing
- Miscellaneous (Low value general use items)
Acquisition Strategy

• Government to Government (Foreign Military sales)
• Leveraging existing arrangements
• Novate user requirements into other Projects where applicable
• Open approaches to market

Contract Types

• Prime vendors
• Deeds
• Standing Offers
• Government to Government

Note: inclusive of design and development clauses where applicable
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Director Simulation
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A New Approach to Land Simulation
Historical Approach

• Focus on common use simulation capabilities, primarily Weapons Training Simulation System (WTSS) and Combat Training Centre (CTC).
• Little oversight of simulation capabilities being developed within projects or other sustainment products.
• Primarily platform based.

The Problem

• Lack of commonality across Land Systems Division (LSD) simulation activities.
• Little simulation expertise beyond WTSS/CTC.
• Adhoc engagement with Directorate of Land Simulation (DLSim, AHQ) leading to potential capability gaps and inefficiencies.
Way Forward

- Continue “ownership” of core simulation capabilities (WTSS and CTC).
- Greater engagement with industry to enable informed support to other acquisition and sustainment procurement.
- Develop an integrated simulation governance and management structure across Land Systems Division.
- Provide a broader range of support to Directorate of Land Simulation (AHQ) and single entry point for AHQ into Land Systems Division for simulation needs.
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Major Emergent Work
Land Systems Division

Diggerworks Forward Work Program

Ballistic & Protective Elements (BPE)

- **Protective Elements sizing** - Options for 5-95% of ADF population; Head as a System - protection level and functionality. Integration of hearing and ocular protection.

Load Carriage Equipment (LCE)

- **Load Augmentation options** - Exo-skeleton analysis / Specialist Packs
- **Load Carriage Enhancements** - Iterative design changes.
- **Next Generation Load carriage options** - Risk Reduction for L125 Ph 4.

Dismounted Electronic Systems (DES)

- **COTS/MOTS Dismounted Electronic System** - options to reduce weight, space and power burden system.
- **Integration of other IIP projects** - Ensure the soldier is the a key consideration for new technologies.

Next Generation SCE

- Integrated soldier system for Land 400 platforms and structures; AHQ SCS Program Modernisation Initiatives.
- Requests for Information.
The Capability Acquisition and Sustainment Group (CASG) purchases and maintains military equipment and supplies in the quantities and to the service levels that are required by Defence and approved by Government.