



Modernisation from Beersheba and Beyond





- Part I: Army The Basics
- Part II: Modernising Army: Plan
 Beersheba
- Part III: What's Next?



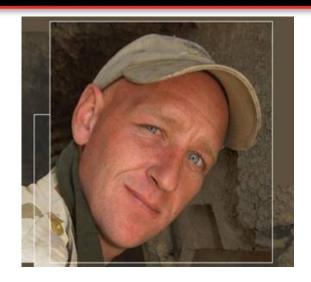
The Basics: Army Tasks

- Contribute land forces as part of a Joint Force to:
 - Deter and defeat armed attacks on Australia.
 - Contribute to stability and security in the South Pacific and Timor-Leste.
 - Contribute to military contingencies in the Indo-Pacific region, with priority given to Southeast Asia.
 - Contribute to military contingencies in support of global security.
- Government directs Army is structured for the first two tasks.
- We defend Australian sovereignty, not just geography:
 - requires human interaction which requires soldiers on the ground.

For its size, the Australian Army is among the most flexible and adaptable ground forces in the world



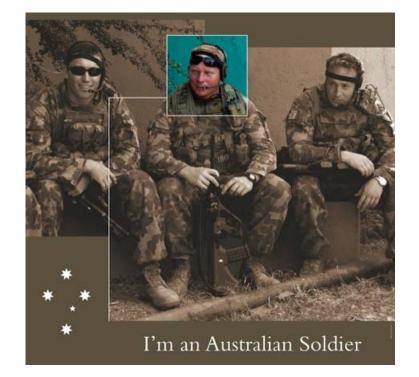
The Basics: We educate, train and equip the soldier



The Australian Army seeks to always generate a *cognitive* edge over its adversaries through high quality soldiers and leaders.

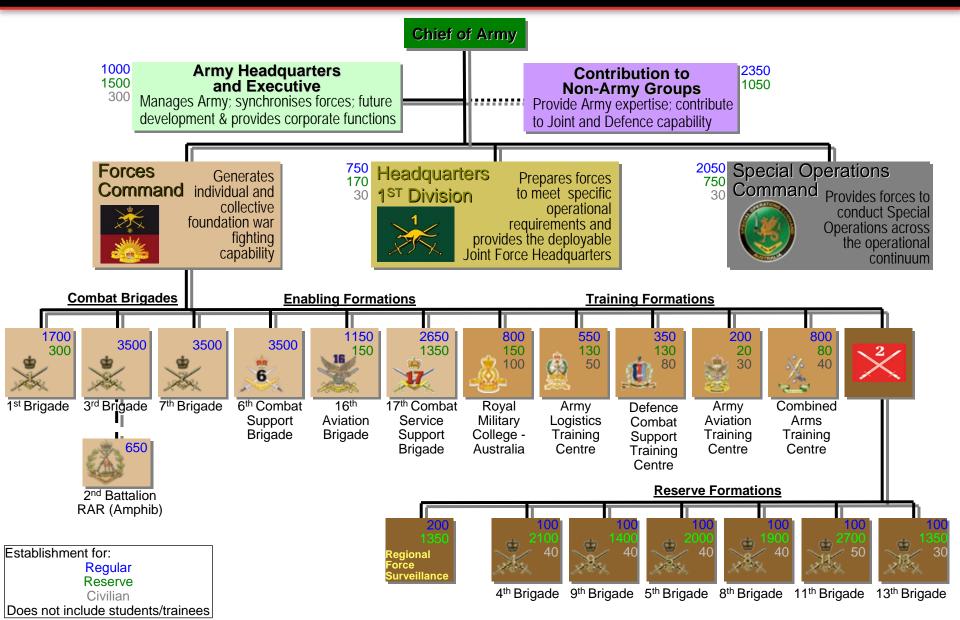
Our capacity to educate and train our soldiers underpins this.







The Basics: Army Structure





PART II: MODERNISING ARMY (TO 2017)



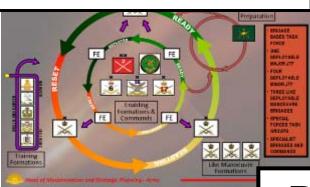
Modernising Army: Plan Beersheba

- Broader range of sustainable options for Govt.
- Incorporate lessons of last 15 years of operations.
- Simpler analysis for procurement.
- Lower cost of ownership / effective use of resources
- Fundamental integration of Reserve capability.
- A land force for the information age that is better able to work in a joint force.



Modernising Army: Plan Beersheba

Force Generation cycle and Training System Reform

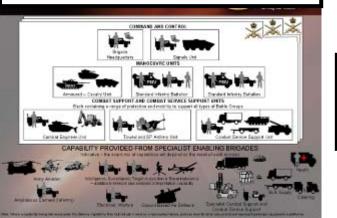


Integrate new capabilities



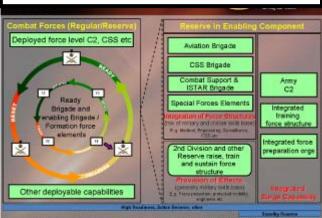
Plan BEERSHEBA

'Brigade Restructure'



WILL HAVE MET ITS OBJECTIVES BY DEC 2016

'Total Force Concept'





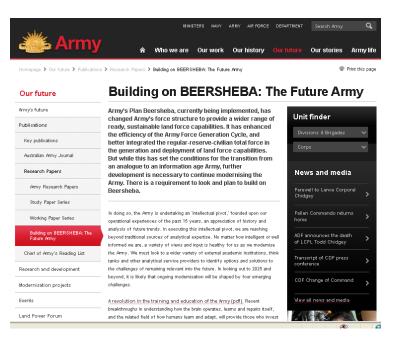
Part III:

What's next?

(2017 AND BEYOND)



Building on Beersheba



The Army Internet Site for Building on Beersheba

- Plan Beersheba has set the conditions for transition from analogue to information age for Army.
- Further development is necessary to continue modernising the Army.
- Four key challenges:
 - A revolution in education and training.
 - Better collective training.
 - A digital Army.
 - A truly joint Army

Army's Vision – Beyond Beersheba

By 2025, the Army has evolved its ideas, operating concepts, structures and its people so that it is best placed to exploit the opportunities of the digital age, is a capable member and contributor to the joint force, and is able to survive and succeed in the future threat environment.



Revolutionising Training and Education

- Built on breakthroughs in understanding how the brain operates, learns and repairs itself, and the related field of how humans learn and adapt.
- Army will invest in human sciences to generate a cognitive edge.
- Implications for recruiting; command and control; force generation; leadership training; mid and late career streaming; individual and institutional learning and adaptation, and in the field of cognitive/neural augmentation.
- Must understand opportunities and vulnerabilities of recruiting from a digital society and digital generation (Gens Y and Z), and what this means in terms of values, human behaviour, assimilation of training and education, and attitudes to information security.

KEY INITIATIVES

- Human capability enduring priority in Army's R&D Plan.
- Greater focus on cognitive base-lining, assessment and enhancement.
- Improved psych screening, resilience training, and mitigation of pysch injuries.
- Aspire to world's best practice in a 'whole of Defence' strategic program.



Enhancing Army's Collective Training

- From 2017 Army will embed the generation of its contribution to the amphibious capability in its force generation system.
- Will drive an increase of the Joint aspects of land force generation and certification, including significant enhancements in the employment of Joint networking and simulation for force design, training, education, mission planning, rehearsal and certification.
- Need also to enhance the force generation process: continue to streamline higher command and control structures to ensure weighting of the workforce towards land combat outputs.

KEY INITIATIVES

- Larger simulated components for land and joint capabilities.
- Benchmark Army operational capability again more demanding opposing forces.
- Incentivise different, and more disaggregated command approaches.
- Better minimisation and management of 'unit and force signatures'.



Building a Digital Army

- The digital environment is changing how the world interacts and learns.
- Warfare will continue to be influenced profoundly by global digital connectivity.
- Will impact on:
 - balance of environment-centric vs multi-environmental forces (Single Services v joint / combined capability)
 - integration of land and joint capability;
 - training and education of all ranks;
 - ideas and structures used to train, deploy and fight;
 - interaction between national forces, other agencies and private military and logistic organisations across the spectrum of operations.

KEY INITIATIVES

- Enhanced intelligence capability and workforce for land, joint and strategic organisations.
- Improved land networking including network protection / assurance (incl Army Cyber Sqn).
- Land force big data exploitation.
- Manned / unmanned ground and air recon, combat teams.
- More survivable land force in the future threat environment.



Digital Army: Enhanced Land Network and Analytics

Enhanced Land Force Digital Network

Timeframe Required: From 2018

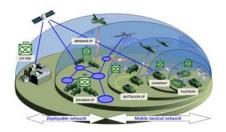
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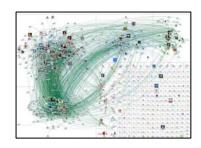
- Further integration of discrete networks and expansion of digitisation into enabling and supporting forces.
- Land network integration with tactical data links and wider Defence network architectures to ensure the land network contributes to the joint battlespace network environment.
- Cyber protection and assurance of the land network resilient to mitigate deliberate attack and degradation due to environmental or operational factors.
- Land network and integral part of joint network.

Big Data Analysis in the Land Domain

Timeframe Required: From 2020

- Land force analytical tools to access, interpret and exploit the 'big military data' generated by the joint force: JSF, P8, AWD, Triton, etc.
- Data management.
- Cyber protection and assurance of big data to mitigate deliberate attack and degradation due to environmental or operational factors.
- Integral part of joint network.







Digital Army: Tactical Aerial Recon

Consolidate Army Manned and Unmanned Tactical Recon Fleets

Timeframe: From 2020

Description:

- Integral close aerial recon support for Combat Brigades.
- Tier One: Support to combat team and below, with optional kinetic attack.
- Tier Two: Support to battle group and above.
- Capable of engaging threats.
- Capable of operating in adverse weather.
- Low visible and electronic signature for medium/high threat environments.
- Linked into land and joint digital network.

Persistent Aerial Surveillance

Timeframe: From 2021

- Airborne, Wide Area Persistent Surveillance System.
- Low visible and electromagnetic signature.
- Employed to detect, identify and track enemy movement and activities as well as counter IED threats and ambushes in complex, urban environments.
- Networked within the joint network.













Digital Army: Lethality and Survivability

Sustain the effectiveness and survivability of land combat operations

Timeframe Required: From 2020

Description:

- Upgrades to M1 fleet to sustain its lethality, survivability and supportability in line with US Army, through to 2035.
- Additional M1 tanks to enhance strategic fleet sustainability.
- Close support to provide mobilty for land manoeuvre utilising M1 chassis vehicle for obstacle clearance and bridging.

Unmanned surveillance, reconnaissance, EOD, resupply capabilities to enhance force protection

Timeframe: From 2015

- Small / medium robotic platforms to provide standoff to inspect and clear suspicious objects during improvised explosive device operations.
- Common Unmanned Ground Platform, comprised of a chassis that can carry lethal Mission Equipment Packages and sensors.
- Autonomous resupply and convoy vehicles for survivable 24/7 logistic delivery operations.













Digital Army: Future Air Mobility









Consolidate Army rotary wing fleets for future tactical air mobility

Timeframe: From 2030

Army's Future Air Mobility Vision

Army's aviation capability of the future will comprise a mix of manned and unmanned tilt rotor, rotary and fixed wing systems.

In combination, the systems will be capable of providing reconnaissance, surveillance, attack, escort, coordination of joint fires, command and control, joint personnel recovery, aero medical evacuation, electronic warfare and intelligence collection, offensive counter air, air mobility, and air assault over a combat radius of up to 1000km, while providing persistent coverage to the Land and Special Forces with aviation task groups that can be tailored for specific missions.



Truly Joint Army

- Develop updated C2, operating and CSS concepts for full exploitation of Army and joint enabler capabilities.
- The combat weight of the deployable land force should be increased by exploiting digital networking to access Joint Fires and ISTAR capabilities, as well as integrate land and joint capability.
- Changes are not just about digital hardware; will drive how Army thinks about its operations and structures within a joint force.

CAPABILITY INITIATIVES

- Reinvigorated future land and joint concepts.
- Better link into, and contribution to, joint ISR, fires and logistics.
- Enhanced amphibious capability.



Joint Army Capability Needs - Amphibious









Round Out the Amphibious Battle Group

Timeframe: From 2016

- Round out to full Cavalry Squadron.
- Additional combat support and combat service support for amphibious operations including:
 - UAVs.
 - Combat Engineers.
 - Air Defence.
 - Amphibious Assault Vehicles.







Joint Army: Amphibious Support

Littoral manoeuvre and sustainment systems

Timeframe: From 2015

Description:

- Fast-moving, light and medium shallow-draft vessels to simultaneously move troops and equipment as combat-ready units in-theatre and deploy them with little or no reception, staging, onward movement at undeveloped ports.
- Follow-on sustainment through joint logistics over-the-shore (JLOTS) operations though independent landing craft, assault craft, and amphibious beach system able to resupply forces in the inter-tidal zone.
- Networked in joint network.
- Combatable with LCH replacement and LHD.

Logistic support systems for amphibious operations

Timeframe: From 2017

- Sustainment systems. Existing / future capabilities, such as helicopters and landing craft, will not meet the workload required for the rapid build-up of stores and materiel. Integral light and medium landing craft, assault craft, and an amphibious beach system able to deploy and resupply forces in the inter-tidal zone.
- Beach recovery system. Amphibious recovery system which can retrieve equipment in the surf and beach zones.













Joint Army: Fires

Enhanced land fires capability

Timeframe Required: From 2018

Description:

- All weather, low signature system to deliver precision fire support at ranges of 30 to 150km.
- Provides a Combat Brigade with integral and persistent fires beyond the limited range of the current M777 Howitzer but within the range of distributed operations that land forces would be expected to conduct.
- Multi-role: supports sea strike and denial functions in the littoral environment.
- Networked in joint/coalition environment.











Close support precision fires close urban / peri-urban operations

Timeframe Required: From 2019

- All weather, low signature system to deliver precision fires.
- Support to combat teams and battle groups conducting distributed operations in urban littoral environment.
- Precision 120mm munitions.
- Networked in land and joint digital environment.
- Vehicle mounted on a L400 chassis.



Joint Army: Counter UAV, RW & RAM





Protection of the land force from low and medium altitude aerial threats

Timeframe Required: From 2018

- Land based sensor to provide sense and warn.
- Distributed kinetic engagement system to counter UAV, and potentially RW threats.
- Counter rockets, mortar and artillery threats.
- MPADS for low level threats.
- Capability to protect manoeuvring land combat units.
- Synchronised with electronic attack.
- Networked in land and joint digital environment.









Building on Beersheba



Available online at:

http://www.army.gov.au/Ourfuture/Blog

- Papers are online, and discussion / feedback encouraged on the new Land Power Forum.
- Part of our intellectual pivot from 15 years of operations, to thinking more about our future.
- Problem definition will continue through to January 2015.
- Detailed planning throughout 2015.