

To establish Townsville as the Australian (and by extension Global) Centre of Excellence (CoE) for Defence Forces Simulation training, training support and simulation capability export. Thereby delivering the potential to generate significant and sustainable economic benefit for the region in line with the Townsville city deal.

Opportunity Overview

Simulation is the future of Defence Force training. The complexity of conducting live training means that Joint force is only rarely achievable and only at great expense due to availability of force elements to train together, significant costs, environmental impacts and a multitude of other constraints.



Live Instrumented Sim (CUBIC)



FMB - Mission specific simulation training



Joint Force Training Single virtual environment

This training is already augmented by (and will increasingly become reliant upon) simulation to achieve credible capability and the readiness that the Commonwealth's Defence demands cost effectively. Australia is undoubtedly amongst the 'forward edge' of simulation training in Defence globally and is on the cusp of a revolutionary advance in training capability enabled by simulation. Townsville currently holds 'pole position' in Australia to become the future home of Defence Simulation for the ADF and our Allies.

By leveraging significant extant simulation services and the forward mounting base (FMB) requirement for Force Preparation (FPrep) capability to be responsive, inexpensive and ideally co-located. Townsville is well placed to make a compelling case for major simulation training investment from Defence and Industry.

By doing so, Townsville will become Australia's de facto centre of excellence (CoE) for Simulation and will be poised to export capability globally.

Benefits to TOWNSVILLE

- Enduring commitment in current simulation training services for ADF and Allies (e.g. Live Instrumented Simulation, delivered by CUBIC locally)
- Attract expanding simulation services and associated supply chain
- Enhanced reputation for serving cutting edge defence capability in the region
- Uplift in Defence forces throughput (ADF and Allied) boosting economy locally
- Increased logistic throughput (air, sea and land) and storage needs in region
- Economic growth opportunities in employment, contracted services and infrastructure development.

Benefits to DEFENCE

Townsville is in the 'pole position' to become the de facto CoE for Defence simulation training on account of the significant investment in simulation facilities already in place, especially for Land environment and Joint force capabilities.

- Established environment for simulation development (Defence, Local Government and simulation industry partnerships in-place)
- Ready labour force (incl. security cleared) and well established, responsive learning providers for any upskilling (i.e. James Cook University)
- Enhances FMB capability (with the bespoke Force Preparation and rapid reconfiguration for short notice deployment capability of Simulation)
- Co-location with major instrumented and Live fire training areas allowing for major hybrid (Live, Virtual and Constructive) training events to be linked to (and by) simulation
- Optimise the benefits to be realised by the resident Combat Brigade's future Networked Simulation Precinct (NSP) by linking to live and Joint training locally.



To establish Townsville as the Integrated Soldier Systems Centre of Excellence (ISSCoE). Similar to the recently successful Military Vehicle Centre of Excellence (MILVEHCoE) in Ipswich, establishing Townsville as the ISSCoE has the potential to generate sustainable economic benefit for the region in line with the Townsville City Deal.

Opportunity Overview

Soldier combat systems are continuously evolving. As weapons evolve, protection must develop to meet these new threats. Digital information is the new capability which assists our forces to outmanoeuvre their opponents. Project Land 125 Phase 4 Integrated Soldier Systems is a multi-phase program dedicated to equipping ADF soldiers with advanced gear and equipment that meet the modern combat requirements and provides advanced features such as decreased detectability, enhanced protection and other improvements that increase the survivability and efficiency of the personnel in the modern battlefield.

Australia is recognised as a leader in soldier combat systems globally. Our Soldier Combat Ensemble (SCE) is a revolutionary balance between mobility and protection that has been developed at great expense, mainly through the integration efforts of Diggerworks in the Capability Acquisition and Sustainment Group of Defence.



Assistive Technologies

There is currently no industry hub for fusion or integration of design, development or evaluation of these soldier combat systems, which significantly adds to the cost of the deployed solutions.

Townsville is well placed to make a compelling case for development of a soldier systems Defence and industry Centre of Excellence (akin to that seen in Ipswich at the Military Vehicle COE) due to its large user population, access to exceptional testing and training areas and R&D collaboration opportunities with JCU and other regional research establishments.

By doing so Townsville can target and attract specialist production and manufacturing facilities and become a springboard for 'on-shoring' of overseas technologies for enhanced Australian Industrial Capability.



Next-generation Ballistic Protection



Power and Data Management

Benefits to TOWNSVILLE

- Enduring opportunity to 'host' soldier systems research and development and military related STEM programs (exoskeleton, e-textile, data management and battery technologies). Potential cross sector applications beyond Defence, e.g. assistive technologies applications to mining and agriculture.
- Attract expanded specialist manufacturing and associated supply chain.
- Enhanced reputation for serving next generation defence capability.
- ISSCoE to draw other national trials and testing where space or environment constrain full trials (e.g. – Singaporean).
- Uplift in industry footprint and Defence Industry collaboration thereby boosting economy locally.
- Economic growth opportunities in employment, contracted services and infrastructure development.

Benefits to DEFENCE

Townsville is by all reasoned evaluation the optimal location to develop the COE for the next generation soldier systems to be acquired as part of Project Land 125 Phase 4 Integrated Soldier Systems on account of the colocation with 30+% of the targeted user group and over 50+% of the relevant specialist training areas and ranges in close proximity.

- Centrally located between the key soldier training/evaluation areas of Shoalwater Bay, High Townsville Field Training Area, Jungle Training Wing Tully, Cowley Beach and Blue Water, with access to major instrumented and Live fire training areas.
- Townsville is Army (soldier) focused. The 'light to fight' war fighter represents the platform for all soldier systems integration.

Defence Unmanned Aerial Vehicles (UAV) Opportunity

To establish Townsville as the base location of choice for Defence UAV capability in the North, capable of hosting all UAVs, but focussed on supporting the training and operations for MALE -REAPER and Tactical UAV – SHADOW. Capabilities should include 1st line servicing, fuelling, arming, mission planning, launch and recovery and ground control. Thereby delivering the sustainable economic benefit for the region in line with the Townsville city deal.

Opportunity Overview

Defence has an emergent and enduring capability requirement for Unmanned Aerial Vehicles (UAVs). UAV capability in Defence is currently subject to a number of major acquisition programs; most significant are the High Altitude Long Endurance (HALE) and Medium Altitude Long Endurance (MALE) UAV programs, both in the acquisition phase. Smaller 'tactical' UAV programs are already in-service.

The HALE program will acquire the TRITON UAV. A very long range surveillance asset, capable of serving its operating areas from anywhere in Australia, it will work closely with the POSEIDEN aircraft from SA, but will require forward mounting basing in the North (Townsville).



MALE - REAPER



MALE - REAPER



Tactical UAV - SHADOW

The MALE program will procure a fleet of REAPER UAV. A shorter (1200km approx.) ranged UAV with armed strike capability. MALE is currently assumed to be going to RAAF Edinburgh, but decision is to be ratified. It should train closely with ground forces and requires live fire areas for weapon training, its operational deployment areas are likely to be to the North. There is a compelling case to be made for REAPER to routinely operate from Townsville for both training and operational readiness.

The in-service SHADOW UAV is based in Brisbane. There is a live opportunity to locate some of the capability in Townsville (even if on a temporary basis to support annual training cycles). This would likely involve some small Defence investment into Townsville airport, but more importantly could help establish Townsville as an active UAV operating base for Defence, which aligns with the Commonwealth's ability to deliver "a secure nearer region, encompassing maritime SE Asia and the South Pacific".

Benefits to TOWNSVILLE

- Economic growth opportunities in employment, contracted services and infrastructure development
- Enhanced regional reputation for servicing cutting edge Defence capability
- Training services demand in logistics, inventory management and maintenance
- Increased logistic throughput (air, sea and land) and storage needs in region
- Uplift in airfield operations.

Benefits to DEFENCE

- Readiness for pre-deployment training. MALE like and Tactical UAV capability is now ubiquitous to all major deployed operations (especially major coalition operations). Any ADF Land Forces deployed will be highly likely to find their operations supported by UAV capability. These forces will likely complete Mission Specific training in TSV and this training should include UAV ALI serials. The routine availability of UAV (MALE and Tac UAV) in Townsville will enable this crucial training at low notice, enhancing ADF readiness overall and capability on arrival in theatre.
- Access and shorter transits to Joint exercise areas and Live air munition ranges of especial importance to the future MALE program
- Ready dispersal areas capable of enabling safe arming of ordinance of Armed UAV platforms
- Access and shorter transits to likely operating areas to the North
- Established Defence relationships and real-estate available at airport
- First line supply and labour force readiness (incl. high proportion security cleared)
- In place storage, maintenance and EO facilities and space for expansion
- Favourable clear weather for UAV training
- Nearby access to Cloncurry's new UAV flight testing facility.

Maritime Replenishment and Logistics Opportunity

To establish Townsville as the forward mounting base location of choice for Defence’s maritime operations and maritime sustainment of joint operations capability in the North. Routinely berthing the Logistic Support Vessels (HMAS CHOULES and future maritime replenishment and logistic support capabilities) for limited first line maintenance, fuelling, provisioning, loading and unloading and joint training. Thereby delivering sustainable economic benefit in line with the Townsville City Deal.

Opportunity Overview

Defence has an enduring capability requirement for Maritime Replenishment and Logistics support afloat to sustain Defence operations and training activities both at sea and overseas. HMAS CHOULES is the in-service logistic vessel dedicated to the support of amphibious operations. The Defence Integrated Investment Plan (IIP) includes provision for acquisition of 2 - 3 additional vessels to address their future needs from 2020 .

Defence intent is to upgrade and extend the life of the ADF’s logistics support ship (HMAS CHOULES) which is capable of undertaking a range of tasks across the spectrum of military operations from providing humanitarian assistance and disaster relief to amphibious lodgement. Planned investment includes updating the ship’s capabilities to better enable it to work effectively with the Canberra Class amphibious ships. These future operational scenarios will inevitably increase the presence of HMAS CHOULES in the North



HMAS CHOULES



HMAS CHOULES



AOR

and therefore the benefit to be realised from an enduring Forward Mounting Base in the North (Townsville) .

The IIP provides for the procurement of an additional 2 Auxiliary Oiler Replenishment (AOR) vessels to sustain the ADF’s fleet at sea. A third AOR ship or additional logistics support ship will be considered in the late 2020s.

Defence is now acquiring a sizeable and enduring maritime replenishment and logistic support afloat capability which will predominantly operate in the North and would significantly benefit from increased readiness and reduced transit costs if berthed, and sustained routinely from a Forward Mounting Base in the North (Townsville) .

Benefits to TOWNSVILLE

- Economic growth opportunities in employment, contracted services and supply chain contracts (fuel, provisions, etc).
- Leverages extant Port of Townsville capabilities (e.g. - high speed refuelling)
- Increased logistic throughput (Air, sea and land) and storage needs in region
- Uplift in port operations.

Benefits to DEFENCE

There are a number of benefits to be realised by Defence by increasing logistic support vessel berthing in Townsville which aligns with the goal of improving the Commonwealth’s ability to deliver *“a secure nearer region, encompassing maritime SE Asia and the South Pacific”*.

- Access and shorter transits to Joint exercise areas
- Access and shorter transits to operating areas to the North
- Established Defence relationships and service agreements with Port of Townsville
- First line supply and labour force readiness (incl. high proportion security cleared)
- In place storage, fuel infrastructure and space for affordable expansion
- Secure Ground, Sea and Air Lines of communication (LoCs).

To establish Townsville as the Forward Mounting Base location of choice and Defence Centre of Excellence (COE) for Joint Amphibious Force Capability. Being uniquely well positioned for mounting operations into SE Asia and the Pacific, and already home to the majority of the ADF's specialist amphibious Land and Aviation force elements Townsville should seek Defence commitment to increase presence of the Amphibious Fleet for limited first line maintenance, fuelling, provisioning, loading and unloading, arming and joint training. Thereby delivering significant sustainable economic benefit for the region.

Opportunity Overview

Defence has an enduring capability requirement for Joint Amphibious Force Projection Capability in Australia. Townsville is uniquely well positioned for mounting operations into SE Asia and the Pacific, and is already home to the majority of the ADF's specialist amphibious Land and Aviation force elements.

The ADF's major amphibious naval vessels, the Landing Helicopter Dock (LHD) and Landing Ship Heavy (LSH), are based in Sydney, resulting in reduced opportunities for interoperability training with embarking Land and aviation joint force elements.

By permanently basing the amphibious fleet and supporting vessels in Sydney with no contingent staging area in the North, the time taken to deploy amphibious force elements into the most likely areas of operations is increased, lengthening the time to

respond to fast moving events and adversely impacting on Australia's ability and options to project force.

The decision to co-locate Joint Forces in Townsville will permit greater routine interoperability training including: joint planning sessions, rehearsal of loading and unloading procedures for troops, equipment and vehicles, heli-handling and deck landing, and cross-littoral readiness training.

This provides increased capability through greater force cohesion and a higher routine standard of amphibious capability.

In the event of short notice deployment, it reduces time for readying to sail (as force elements are well practiced and familiar with each other's standard operating procedures) and there is a reduction in essential pre-deployment training.



Embarked Land Forces



Amphibious operations



Embarked Aviation

Benefits to TOWNSVILLE

- Economic growth opportunities in employment, contracted services and supply chain contracts (fuel, provisions, etc)
- Leverages extant Port of Townsville capabilities (e.g. - high speed refuelling)
- Increased logistic throughput (Air, sea and land) and storage needs in region
- Uplift in port operations.

Benefits to DEFENCE

There are a number of benefits to be realised by Defence by increasing RAN presence and establishing the Amphibious COE in Townsville which aligns with the goal of improving the Commonwealth's ability to deliver "a secure nearer region, encompassing maritime SE Asia and the South Pacific".

- Co-location of Joint force elements for concept development, joint force amphibious planning, training and interoperability development.
- Access and shorter transits to major Joint exercise areas
- Access and shorter transits to operating areas to the North
- Established Defence relationships and service agreements with Port of Townsville
- First line supply and labour force readiness (incl. high proportion security cleared)
- In place storage, fuel infrastructure and space for affordable expansion
- Secure Ground, Sea and Air Lines of communication (LoCs).

To establish Townsville as the Army's super base for rotary wing capability. Thereby simultaneously maximising the Army's rotary wing capability, in terms of both readiness and cost of sustainment, and delivering sustainable economic benefit for the Townsville region.

Opportunity Overview

Defence has an enduring capability requirement for Army Aviation in Australia. Townsville is optimally positioned to realise an increase in effectiveness and significant savings for the Army Aviation capability by collocating the majority of 16 Aviation Brigade's deployable units, training capability and its headquarters in close proximity to a strategic airfield, port and expansive live fire training ranges with weather conditions conducive for flying operations throughout the year.

Currently the Army's Aviation Regiments are located in Darwin, Townsville and Sydney with a main headquarters located in Brisbane. This is not based upon any capability or operational need and such 'penny packeting' of the Army's Aviation Units limits the opportunity for economies of scale and the demonstrable associated advantages to Aircraft sustainment and basing (e.g.- RAAF super-base Ipswich).



Army Armed
Reconnaissance Aviation



Army heavy lift Aviation



Army medium lift Aviation

The current dispersed model constrains Army Aviation readiness to deploy, as force elements would need to be repositioned to a single FMB (likely TSV) or projected incoherently from several POE.

Co-locating the Army's aviation training capability will realise further synergies in combined training and of course cost savings long term as ab initio and continuation training of aircrew will be at their home station.

With Army Aviation's deployable and training units in one location it is self evident that the command should also be at the point of Main Effort for Army Aviation.

Detachments from the aviation brigade can then sustain any operational and training imperatives elsewhere either temporarily or as enduring rotation.

Benefits to TOWNSVILLE

- Economic growth opportunities in employment, contracted services and infrastructure development
- Provide employment opportunity for skilled veterans residing in the region
- Training services demand for aviation engineering, maintenance, logistics and inventory
- Increase in skilled professional workforce in Townsville

Benefits to DEFENCE

- Increase effectiveness by collocating Army Aviation Command and Control with its operational Regiments
- Increase aviation capability with reduced transit times to military flying training areas in a location averaging 320 days of clear weather per year
- Decrease cost by concentrating aircraft, maintenance capability and logistics in one location
- Increase deployable readiness with close proximity to C17 capable RAAF Base and a port optimised for LHD support
- Decreased transit times to joint exercise areas and deeper level maintenance facilities
- Decreased personnel costs due to reduced postings requiring long distance removals
- Increase retention through stability and predictability of home station for air crew and support personnel.
- Decongestion of over crowded facilities at Enoggera barracks through relocation of headquarters to TSV.