6. Defence and Space

All statistical data are courtesy of: Department of Industry and Science, Australian Government, and Business Council of Australia.

Overview

The defence industry provides equipment and ongoing support for our armed forces as they in turn fulfil their many roles in providing national security, operate offshore to deliver foreign aid or support our other foreign policy objectives, or deploy onshore in times of national emergency. Engineering capability underpins the success of the defence sector and spans a full range of products and services to support land, air and naval forces. Equally important are advanced electronics and systems engineering, which provide technological innovations to support all areas of defence capability. Defence engineering brings opportunities to work on some of the most technologically advanced projects in Australia.

sec 0	Automotive
sec 1	Health
sec 2	Construction
sec 3	Manufactuirng and Agriculture
sec 4	Oil, Gas, Energy
sec 5	Mining and Metals
sec 6	Defence and Space
sec 7	Electricity, Gas, Water and Waste Services
sec 8	Education and Training
sec 9	PowerGen

Sector information

With strong outlook and in a competitive world, the Australian Defence Force is focused on future growth through employing more engineers – including more women into the sector. The ADF makes an enormous contribution to the Australian economy annually with a budget of AUS$31.9 billion for 2015-16 and with GDP of 1.92 percent. The ADF is supported by a significant budget by worldwide standards and is able to maintain a presence and engineers in multiple locations around Australia. Since their establishment, they have prided themselves on delivering the industry critical components their customers require.

Defence subsectors:
1. Research and development*
2. Facilities and Infrastructure*
3. Air Force*
4. Army and Navy*
5. Contractors and Suppliers

*Indicates that potential employment opportunities exist in the sub sector for automotive engineers transitioning

High level skill mapping

Defence and Space — Roles and Skills	Research and Development	Facilities and Infrastructures	Air force	Navy and Army	Contractors and Suppliers
Mechanical Engineer	X	X	X	X	X
Electrical Engineer	X	X	X	X	X
Software Engineer	X	X	X	X	X
Control Systems Engineer	X	X	X	X	X
Data Analysis	X		X	X	X
Problem Solving	X	X	X	X	X
Research & Development	X	X		X	
Design and Development	X			X	
CAD and 3D Modelling	X			X	
CAE (Simulation and Analysis)	X		X	X	
Product Development		X	X		
Production Engineering		X	X	X	
Testing	X	X	X	X	X
Validation Engineering	X	X		X	
Vendor Management	X	X		X	X
Quality Engineering	X	X		X	
Project Management	X	X		X	X
Technical Sales Engineering	X				X
Maintenance	X	X	X	X	
Business Development	X	X	X	X	X
Business Management	X	X	X	X	X
Strategic Planning	X	X	X	X	X
Leading Teams	X	X	X	X	X

Potential Opportunities and Synergy

Subsector	Potential Opportunity Areas	Job Synergy
Research and Development	Mechanical and Control Systems Engineers, Project Managers, Project development Officers, Data Analysts, Software engineers, Researchers.	Conducts research in various areas of defence and air force, Project development and management, software generations and implementations.
Facilities and Infrastructure	Mechanical and control system engineers, Project managers	Boosted rate in maintenance management, operations engineering, project management and asset management is expected
Air force	Mechanical and control systems engineers, project managers, data analysist, software engineers	Still demand in aerospace and air force technologies, system and software implementations and maintenance management and operations
Navy and Army	Mechanical engineers, Project Engineers	Mechanical systems and maintenance engineers in demand in this subsector
Contractors and Suppliers	Project and business management, delivery management and supply chain.	No demand for mechanical engineers, still demand for project engineers and business managers.