

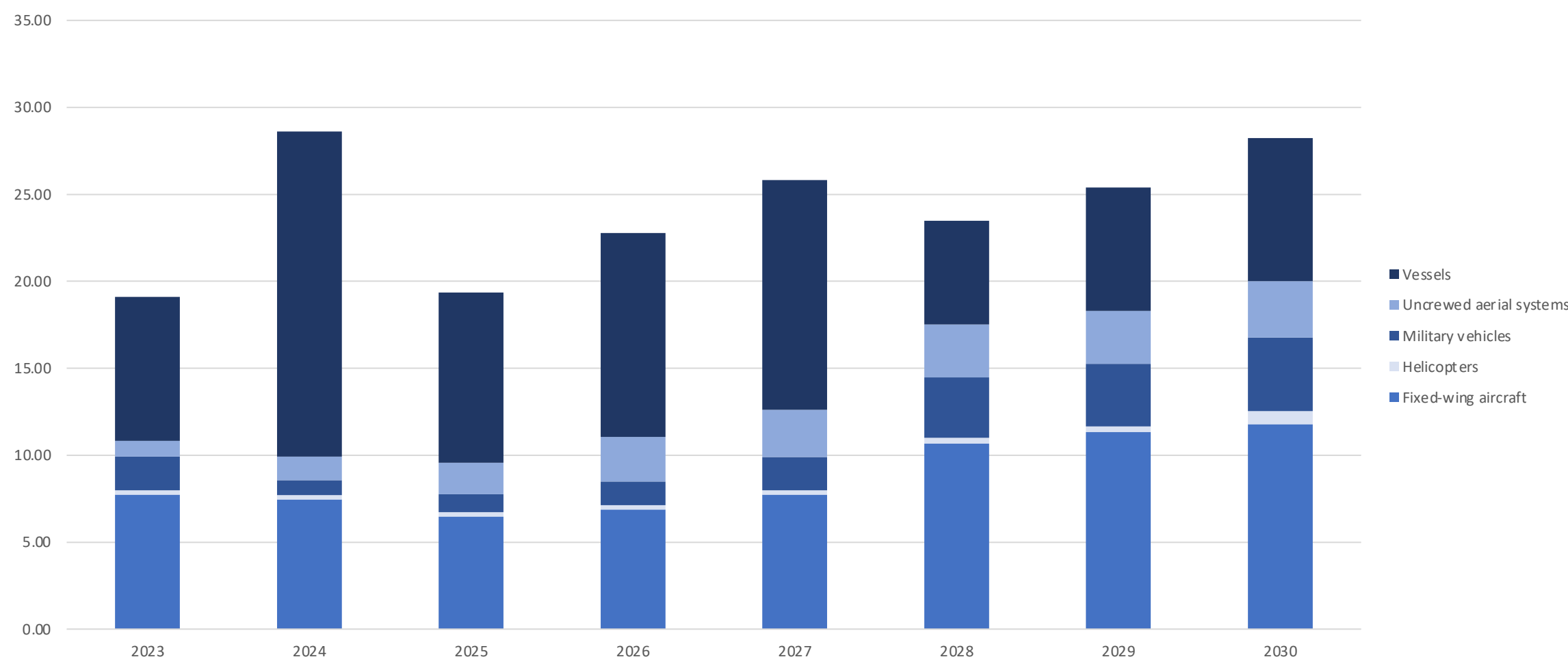


GLOBAL DEFENCE MARKET
TOP PROGRAMMES AND OPPORTUNITIES

GET THE DECISIVE EDGE

TOP 5 SPENDING SUMMARY

Procurement Spending For Global Top 5 2022-28



GLOBAL TOP PROGRAMMES

Top 10 largest Programmes

| Country | Subcategories | Programme Name | Programme Status | Programme Value (\$bn) | Contract Award Date |
|---------|---------------------------------------|---|--------------------|------------------------|---------------------|
| USA | Submarines: nuclear, attack | SSN(X) Programme | Announced | 179.8 | 2035 |
| USA | Fighter - multirole | F-35A Joint Strike Fighter - USAF Future Procurement | Announced | 157.3 | 2026 |
| USA | Fighter - multirole | Penetrating Counter Air (PCA) | Forecast | 129.2 | 2024 |
| USA | Submarines nuclear, ballistic missile | Columbia Class Submarine (3-12) | Announced | 79.7 | 2026 |
| USA | Bomber | B-21 Raider (USAF) | Announced | 78.0 | 2022 |
| USA | Destroyers | Next-Generation Large Surface Combatants (LSC) - DDG(X) | Announced | 63.8 | 2029 |
| CANADA | Frigates | Canadian Surface Combatant (CSC) | Contracted/Awarded | 52.7 | 2019 |
| USA | Military helicopters - multirole | FLRAA - Future Long Range Assault Aircraft (USA) | Announced | 51.0 | 2021 |
| USA | APCs/IFVs - tracked | OMFV | Announced | 45.0 | 2027 |

Top 10 unawarded Programmes

| Country | Subcategories | Programme Name | Programme Status | Programme Value (\$bn) | Contract Award Date |
|-----------|---------------------------------------|---|------------------|------------------------|---------------------|
| USA | Submarines: nuclear, attack | SSN(X) Programme | Announced | 179.8 | 2035 |
| USA | Fighter - multirole | F-35A Joint Strike Fighter - USAF Future Procurement | Announced | 157.3 | 2026 |
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| USA | Destroyers | Next-Generation Large Surface Combatants (LSC) - DDG(X) | Announced | 63.8 | 2029 |
| USA | Military helicopters - multirole | FLRAA - Future Long Range Assault Aircraft (USA) | Announced | 51.0 | 2021 |
| USA | APCs/IFVs - tracked | OMFV | Announced | 45.0 | 2027 |
| USA | Submarines: nuclear, attack | Virginia Class Attack Submarine (SSN 812 - SSN 821) | Announced | 43.4 | 2023 |
| AUSTRALIA | APCs/IFVs - tracked | Project Land 400 Phase 3 (Australia) | Bid | 19.5 | 2022 |

GLOBAL NAVAL PROGRAMMES

| Country | Subcategories | Programme Name | Programme Status | Programme Value (\$bn) | Contract Award Date |
|---------|--|---|--------------------|------------------------|---------------------|
| USA | Submarines: nuclear, attack | SSN(X) Programme | Announced | 179.8 | 2035 |
| USA | Submarines nuclear, ballistic missile | Columbia Class Submarine (3-12) | Announced | 79.7 | 2026 |
| USA | Destroyers | Next-Generation Large Surface Combatants (LSC) - DDG(X) | Announced | 63.8 | 2029 |
| CANADA | Frigates | Canadian Surface Combatant (CSC) | Contracted/Awarded | 52.7 | 2019 |
| USA | Submarines: nuclear, attack | Virginia Class Attack Submarine (SSN 812 - SSN 821) | Announced | 43.4 | 2023 |
| USA | Submarines: nuclear, attack | Virginia Class Attack Submarine (SSN 792-SSN 811) | Contracted/Awarded | 42.2 | 2014 |
| USA | Fighter - naval | F-35C Carrier Variant | Contracted/Awarded | 36.1 | 2008 |
| USA | Submarines nuclear, ballistic missile | Columbia Class Submarine (SSBN 826 - 827) (1-2) | Contracted/Awarded | 24.4 | 2020 |
| USA | Military UAS - MALE | MQ-25 Stingray - Additional Units (USA) | Contracted/Awarded | 12.6 | 2023 |
| USA | Military UAS - fixed-wing, Military UAS - HALE | MQ-4C Triton - Additional Units (USA) | Announced | 6.4 | 2025 |
| USA | Military UAS - fixed-wing, Military UAS - HALE | MQ-4C Triton (USA) | Contracted/Awarded | 4.9 | 2016 |
| USA | Military UAS - fixed-wing, Military UAS - MALE | MQ-25 Stingray (USA) | Contracted/Awarded | 2.6 | 2018 |

GLOBAL ARMY PROGRAMMES

| Country | Subcategories | Programme Name | Programme Status | Programme Value (\$bn) | Contract Award Date |
|--------------|----------------------------------|--|--------------------|------------------------|---------------------|
| USA | Military helicopters - multirole | FLRAA - Future Long Range Assault Aircraft (USA) | Announced | 51.0 | 2021 |
| USA | APCs/IFVs - tracked | OMFV | Announced | 45.0 | 2027 |
| AUSTRALIA | APCs/IFVs - tracked | Project Land 400 Phase 3 (Australia) | Bid | 19.5 | 2022 |
| USA | APCs/IFVs - tracked | AMPV (US) | Contracted/Awarded | 14.6 | 2014 |
| INDIA | Tanks | FRCV | Announced | 14.2 | 2028 |
| SAUDI ARABIA | APCs/IFVs - 8x8 | Saudi Arabia National Guard LAV 700 | Contracted/Awarded | 11.0 | 2014 |

GLOBAL AIR FORCE PROGRAMMES

| Country | Subcategories | Programme Name | Programme Status | Programme Value (\$bn) | Contract Award Date |
|---------|--|--|--------------------|------------------------|---------------------|
| USA | Fighter - multirole | F-35A Joint Strike Fighter - USAF Future Procurement | Announced | 157.3 | 2026 |
| USA | Fighter - multirole | Penetrating Counter Air (PCA) | Forecast | 129.2 | 2024 |
| USA | Bomber | B-21 Raider (USAF) | Announced | 78.0 | 2022 |
| USA | Military UAS - fixed-wing, Military UAS - MALE | MQ-9A Reaper (USAF) | Contracted/Awarded | 7.7 | 2020 |
| CANADA | Military UAS - fixed-wing, Military UAS - MALE | Remotely Piloted Aircraft Systems (RPAS) (Canada) | Bid | 3.9 | 2024 |
| GERMANY | Military UAS - fixed-wing, Military UAS - MALE | Eurodrone (Germany) | Contracted/Awarded | 3.0 | 2022 |
| ITALY | Military UAS - fixed-wing, Military UAS - MALE | Eurodrone (Italy) | Contracted/Awarded | 2.2 | 2022 |
| FRANCE | Military UAS - fixed-wing, Military UAS - MALE | Eurodrone (France) | Contracted/Awarded | 1.7 | 2022 |
| SPAIN | Military UAS - fixed-wing, Military UAS - MALE | Eurodrone (Spain) | Contracted/Awarded | 1.7 | 2022 |

MILITARY AIRCRAFT

F-35 JOINT STRIKER FIGHTER (USA)

The USAF joint striker programme is currently the largest procurement programme in the DoD. The F-35 aircraft is being procured for a number of different branches of the armed forces, including the Air Force, Marines, and Navy.

The USAF is planning to order 1137 F-35As between FY2026 and FY2048 under the Joint Strike Fighter (JSF) program. The purchase will be at a rate of 60 per year from FY2026 to FY2043. The last procurement of 48 aircraft is scheduled to be in FY2044 with expected deliveries by 2046.

The JSF programme will develop and field a family of aircraft that meets the needs of the US DoD and US allies with the F-35A Conventional Take Off and Landing (CTOL) variant, the F-35B Short Take-Off and Vertical Landing (STOVL) variant, and the F-35C Carrier Variant (CV) with optimum commonality among the three variants to minimize life cycle costs.

USAF is acquiring a total of 1777 F-35 multirole aircraft, of which procurement began in 2007. The USAF ordered 400 F-35 aircraft until FY2020, the remaining 240 out of 1377 fighters will be acquired at a rate of 48 per year between FY2021 to FY2025. According to the US FY2021 budget document, Turkey's removal from the JSF program and transition to the alternate supply chain sources may challenge to achieve lot over lot savings that are comparable to prior years.

PENETRATING COUNTER AIR (USA)

The USAF is working on Penetrating Counter Air (PCA) aircraft concept which may replace F-15C/Ds and F-22s in service, and complement F-35s. Boeing, Lockheed Martin and Northrop Grumman have all unveiled their PCA sixth-generation fighter concepts or artist's impressions.

The US is expected to spend around \$5 billion until 2030 for the development of this new aircraft. USAF has not determined the characteristics of the PCA aircraft, but the Air Force Air Superiority 2030 Flight Plan indicated the need for a highly advanced air-superiority aircraft to be fielded in the early to mid-2030s.

Congressional Budget Office projections include the purchase of 414 PCA aircraft with an average procurement cost of about \$300 million each. Procurement appropriations would begin in 2028, and the first PCA aircraft would enter service in 2030. CBO projects that, by 2050, the PCA aircraft would replace the roughly 400 F-15C/Ds and F-22s that the Air Force operates today.

B-12 RAIDER (USA)

The US DoD is planning to acquire up to 100 B-21 long-range stealth bomber aircraft to replace its current fleet of B-1 and B-2 bombers, and possibly B-52s in the future. The aircraft, being designed and developed at Northrop Grumman's Melbourne facility, is built to have both conventional, nuclear capabilities as well as manned and autonomous capabilities.

Northrop Grumman was awarded an \$23.5 billion development contract in October 2015. The B-21 procurement funding of \$55 billion will begin from FY2022, according to the FY2020 budget documents and the 'Air Force B-21 Raider Long-Range Strike Bomber' report, updated in November 2019, by the US Congressional Research Service. The final production contract is estimated to be awarded in 2022.

Consequently, the total programme value is an estimated \$78 billion, making it one of the largest procurement programmes globally.

FLRAA FUTURE LONG RANGE ASSAULT AIRCRAFT (USA)

The US Future Long-Range Assault Aircraft (FLRAA) programme will provide a replacement for the UH-60 Blackhawk helicopter fleet. The project is forecast to transition from development to production in 2028 to allow the Army to begin equipping its first squadrons by 2030. The total procurement cost is estimated to be around \$23.2 billion.

On 31 March 2021, the US Army Program Executive Office of Aviation announced that Bell Textron and a Sikorsky-Boeing have each received Competitive Demonstration and Risk Reduction Phase 2 contracts for the Future Long Range Assault Aircraft (FLRAA) programme.

The contract for Bell Textron is worth \$292.65 million, while the deal for Sikorsky-Boeing is valued at \$284.39 million. The source selection phase of the FLRAA competition started in September 2021 with the submission of proposals by the competing firms for evaluation by the US Army.

In FY 2022 it has been reported the US Army has requested \$448.4 million for the programme and has announced intentions to perform a virtual prototyping phase which will begin alongside the contract award time, continuing through the first quarter of FY 2024.

F-35C CARRIER VARIANT (UNDER JFS)

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NAVAL**SSN(X) PROGRAMME**

The SSN(X) programme to replace the Virginia-class began receiving funding in FY2021 to start research and development. The development of the SSN(X) will coincide with the construction of the Virginia-class SSNs and the Columbia-class SSBNs in an attempt to maintain an experienced submarine industry.

The future SSN(X) will be designed for greater transit speed under increased stealth conditions in all ocean environments. It will be capable of carrying a larger inventory of weapons and diverse payloads than the Virginia-class while retaining the multi-mission capability and sustained combat presence in denied waters with the renewed priority of the anti-submarine warfare (ASW) mission against sophisticated threats in more significant numbers.

With increased capability and size over its predecessors, the SSN(X) unit cost is estimated at \$5.8 billion in 2021, while 31 units could be procured. Based on the USN's estimated 2021 value SSN(X) unit cost, the procurement of 31 submarines would cost \$179.8 billion. The Navy's FY2023 budget requests \$237 million to develop the SSN(X). \$143.949 million accounts for Project 2368 (SSN(X) Class Submarine Development), while \$93.07 million for Project 2370 (Next Generation Fast Attack Nuclear Propulsion Development). The submarines are expected to start entering service in the early 2040s.

VIRGINIA-CLASS PROGRAMME

The US Navy's Virginia-class nuclear-powered attack submarines (SSN) are the foundation of US naval power. Also known as the SSN 774 class, these boats are replacing the old Los Angeles-class SSNs. Up to 48 Virginia-class submarines are planned, with 21 Virginia-class SSNs delivered and 38 ordered. Currently, there are 15 vessels under construction and under contract being built by General Dynamics Electric Boat (GDEB) and Huntington Ingalls Industries (HII).

The most recent order was the largest contract the service had ever placed for nine Block V Virginia-class submarines in December 2019. Awarded to General Dynamics Electric Boat (GDEB), the contract is a \$22.2 billion fixed-price incentive fee, multi-year procurement contract for the fiscal years 2019 to 2023, giving an estimated unit cost of \$2.47 billion each for the Block V submarines.

A Block VI is expected to follow with the US Navy looking at improvements for a Block VI with construction planned for 2024. The upgrades needed for Block VI are for special operations forces (SOF). The procurement of 48 platforms would cost around \$152.5 billion.

COLUMBIA-CLASS PROGRAMME

The Columbia (SSBN-826) class program is to design and build a new class of 12 ballistic missile submarines (SSBNs) to replace the Navy's current force of 14 Ohio-class SSBNs, which begin retirement at a rate of one per year starting in 2027. The latest 2023 US Defence Budget estimates the total Columbia-class programme acquisition cost at \$112.7 billion. The first boat is expected to be delivered in 2027, where it will undergo further outfitting and will be commissioned around 2031.

According to the Congressional Research Service, excluding costs for plans, the estimated hands-on construction cost of the first ship is \$8.4 billion. General Dynamics Electric Boat was selected as the shipbuilder in March 2016, with the submarines to be built at Huntington Ingalls Industries (HII) Newport News Shipbuilding unit in Virginia and General Dynamics Electric Boat in Groton, Connecticut. The submarines are expected to enter service between 2031 and 2042.

NEXT GENERATION LARGE SURFACE COMBATANT (LSC) - DDG(X)

The US Navy has begun developing the next-generation Large Surface Combatant (LSC). The future vessel is to have a new hull design to be easily modernised but initially be fitted with the combat systems familiar to the services shipbuilders and engineers from the DDG Flight III destroyers.

The current Ticonderoga-class has been in service since 1983 and consists of 22 out of the original 27 built. Due to the long-running replacement programme, half of the 22 are undergoing upgrades to keep them in service until the 2030s, while the remaining 11 are to be gradually decommissioned. On this basis, the new LSC will need to enter service in the 2030s if the USN hopes to avoid a gap in capability. Should the construction start in 2030, the first vessel could be commissioned around 2035/2036. It is estimated that up to two per year could be delivered, with all 22 delivered by 2047.

Twenty-two vessels have been estimated to replace the current Ticonderoga-class cruisers in service, costing around \$2.9 billion. This would give a programme value of \$63.8 billion.

CANADIAN SURFACE COMBATANT

The Canadian Surface Combatant (CSC) project is part of the National Shipbuilding Strategy to replace the Iroquois-class destroyers and the Halifax-class multi-role patrol frigates. The CSC project is Canada's largest and most complex shipbuilding initiative since WWII.

A total of 15 vessels are being procured with a design contract awarded to Lockheed Martin and BAE Systems in February 2019 for the Type 26 design. Irving Shipbuilding Inc. will build the ships, and Lockheed Martin Canada is continuing the design work for the vessels following the design phase beginning in February 2019.

The programme is valued at CAD\$69.8 billion (\$52.7 billion) over 26 years. Construction is due to start in the early 2020s, with the design phase set to be completed in 2022/2023. The production cost of the vessels alone is CAD 53.2 billion (\$40.3 billion), giving a unit cost of \$2.55 billion.

LAND PROGRAMMES

OPTIONALLY MANNED FIGHTING VEHICLE (USA)

Part of the US Army's Next Generation Combat Vehicle (NGCV) project, the Optionally Manned Fighting Vehicle (OMFV) is a new IFV that will replace the US Army's ageing M2 Bradleys. Originally started in April 2019, the acquisition effort experienced technical difficulties and had a rigid acquisition schedule, leading to a new programme to be launched in February 2020. Building on the experience of previous Bradley replacement projects, current programme requirements emphasise the survivability of the OMFV against enemy armoured threats.

In July 2021, five bidders were awarded development contracts including the General Dynamics Land Systems, BAE Systems, Team Lynx (led by Rheinmetall), Oshkosh Defense and Point Blank. It is understood that Mettle Ops and Arey Engineer Group also submitted bids. The US Army expects to award the first LRIP contract in Q4 FY2027, followed by full-rate production in FY2030.

While the US Army has not disclosed the size of the procurement effort, the programme is expected to replace 3,800 M2, M3 and M7 Bradleys currently in service with the US Army. Shephard understands that the OMFV programme will have an overall cost of approximately \$45 billion including development costs.

PROJECT LAND 400 PHASE 3 (AUSTRALIA)

The largest and most expensive project in the history of the Australian Army, the Land 400 programme covers the acquisition of the next generation of armoured fighting vehicles. Under Phase 3 of this programme a tender for 383 tracked IFVs and 17 Manoeuvre Support Vehicles (MSVs) was launched in August 2018. At the same time, the Australian DoD released a separate RfI for several other armoured vehicles, including 50 amphibious APCs that would be able to transport troops from ship to shore. Although this is expected to be provided by the same supplier that is awarded the rest of the programme, it does not have to be based upon the same platform as the standard IFV.

Originally expected to be worth between A\$10 and A\$15 billion (US\$7 and 10.4 billion), the cost of the programme has increased to between A\$18.1 and A\$27.1 billion (US\$13 and US\$19.5 billion) in the 2020 Force Structure Plan.

While two platforms have been down-selected for the tracked IFV and MSV element of the programme, there has been no further announcement regarding the amphibious element of the programme. In July 2022, new reports emerged that the Australian Army would reduce the initial number of IFVs to 300.

AMPV (USA)

The US Army initiated the AMPV programme to acquire a replacement for several variants of the M113 tracked APC, which has been in service with the 1960s. While this platform no longer serves as an APC in the US Army, it continues to be operated by Armored Brigade Combat Teams (ABCTs) in several specialised roles such as mortar carrier and command vehicle. The US Army plans to procure 2,897 AMPVs including up to 551 LRIP examples.

Both General Dynamics Land Systems (GDLS) and BAE Systems competed for the AMPV programme. GDLS offered both its wheeled Stryker Double-V Hull (DVH) 8x8 armoured vehicle and a tracked version of the same platform known as the Stryker+Tr. Ultimately, BAE Systems was awarded a contract worth \$1.2 billion in December 2014. This included a \$382 million engineering and manufacturing development contract covering the production and testing of 29 prototypes spread across a 52-month period, as well as an option for 289 low-rate initial production (LRIP) vehicles.

The first prototype AMPV was delivered by BAE Systems in December 2016. US Army testing commenced in September 2017 and by April 2018, all 29 prototypes had been delivered. In January 2019, the AMPV has entered the LRIP. Shephard understands that BAE Systems is planning to begin full-rate production by Q4 FY2022.

FRCV (INDIA)

India released its third RfI for the Future Ready Combat Vehicle (FRCV) programme in June 2021. Intended to replace approximately 1,900 T-72M1 Ajeya MBTs in service with the Indian Army, the project aims to procure 1,770 new MBTs in accordance with the Indian government's 'Make in India' policy.

Based on this modelled unit cost, the FRCV programme could have a procurement cost of approximately \$14.160 billion (in 2021 US dollars), though the platform will be procured in several phases through multiple contracts and will also offer substantial opportunities for the OEM in support costs. It is understood that a total of 12 companies have received the RfI, and the Indian government is focusing on Russian and French offers in particular.

The RfI calls for the FRCV to enter service in 2030 and expects the platform to have a service life of between 40 and 50 years. The programme is expected to reach the RfP stage in 2023.

LAV 700 (SAUDI ARABIA)

In 2014, the Saudi Arabian government signed a contract worth approximately C\$15 billion (US\$11 billion) to procure the LAV 700 8x8 platform from General Dynamics Land Systems - Canada (GDLS-C). The Saudi Arabian LAV 700 order is believed to encompass several variants including APC, ambulance, armoured recovery vehicle, command post, ATGM carrier, IFV, VIP transport and a direct fire support vehicle armed with a turreted 105 mm gun.

Few details of this contract have been disclosed, but it is possible these new platforms are being procured to replace or supplement previous batches of LAV-series vehicles that have been deployed by the Saudi Arabian National Guard (SANG). According to leaked GDLS-C internal documents released in March 2017, the number of LAV 700s ordered by Saudi Arabia was reduced from 928 to 742 vehicles. It should be noted that the programme has experienced setbacks due to the use of Canadian military vehicles in Yemen and a series of diplomatic rows between the two countries. However, as of August 2022, Shephard understands that the programme remains on track.

The exact number of vehicles to be delivered under the contract has not been officially disclosed, but is generally believed to be at least 742. If the US\$11 billion programme value and the number of platforms is correct, each Saudi Arabian LAV 700 has a unit cost of approximately US\$14.8 million. The relatively high unit cost for an 8x8 platform may suggest that the contract includes additional elements such as support or technology transfer.

UAV**MQ-25 STINGRAY (USA)**

The MQ-25 Stingray, or Unmanned Carrier Aviation (UCA), programme aims to develop a UAS to primarily conduct aerial refuelling; while also possessing an ISR capability. With these capabilities, the MQ-25 will extend Carrier Air Wing (CVW) mission effectiveness range; partially mitigate the current Carrier Strike Group's organic ISR shortfall and fulfil the future CVW-tanker gap.

Despite the programme beginning as Unmanned Carrier Launch Airborne Surveillance and Strike (UCLASS) in 2013, the first contract was not awarded to Boeing until 2018 after a fragile development. To date, seven units have been ordered at a total cost of \$889.7 million in addition to \$2.605 billion worth of development. According to a USN estimate in 2019, 76 platforms will eventually be delivered to the USN at a cost of around \$15.2 billion; a near \$2 billion increase on the originally estimated \$13.3 billion.

The seven currently contracted units are expected to be constructed by August 2024. According to USN documents, the first 11 units of the additional 69 will enter Low-Rate Initial Production (LRIP) from FY2023 through to FY2025. Moving forward, the remaining units will enter Full-Rate Production from 2025 onwards, with Shephard estimating the final units will be delivered to the US in 2035.

MQ-9A REAPER (USAF)

Since 2007, the USAF has operated General Atomics Aeronautical Systems (GA-ASI) MQ-9 Reaper, most recently funding additional units in FY2022, according to FY2023 Budget estimate documents. Based on these documents from FY2019 to FY2023, throughout one and a half decades, the USAF is thought to have ordered 421 MQ-9s for \$7.739 billion.

After years of attempts, the USAF's FY2023 Budget Estimate again states that the MQ-9 production line will be shut down, requesting \$10.03 million in that year's funding "to be used for production line shutdown activities". This appetite to end the production line is shared by many, with Lt. Gen. David Nahom, USAF deputy chief of staff for plans and programs, stating in May 2021 that the USAF had a "fleet of over 300 MQ-9s right now" with "15-plus years left on them, and that's a good place to be".

MQ-4C TRITON (USA)

The MQ-4C Triton programme, developed under the Broad Area Maritime Surveillance (BAMS) programme, required an uncrewed system to provide persistent real-time intelligence, surveillance and reconnaissance missions (ISR) over high-altitude and long endurance. In total, the USN planned to acquire 68 platforms. However, according to an FY2021 budget report, \$11.35 billion of funding had been allocated for only 65 aircraft, not the 68 initially planned.

To date, 17 units have been contracted for a combined \$3.172 billion, with the manufacturer Northrop Grumman announcing the most recent \$248.23 million contract award on 22 June 2022. As stated by the FY2021 budget, a further 11 units are planned to be procured between FY2023 and FY2025; resulting in an expected 28 units being produced prior to an in FY2025. These 28 units, as laid out in the USN's FY2021 and FY2022 budget documents, will cost \$4.902 billion. To meet its FY2021 goal of acquiring 65 MQ-4C Triton's, another 37 units will need to be acquired by the USN after FY2025 for \$6.448 billion.

Shephard forecasts the final delivery will be made in 2033, 14 years after the first delivery was conducted in 2019.

REMOTELY PILOTED AIRCRAFT SYSTEMS (CANADA)

Formally the Joint Unmanned Surveillance and Target Acquisition System (JUSTAS) project, the Remotely Piloted Aircraft Systems (RPAS) project is a Royal Canadian Air Force (RCAF) programme to procure a UAS for the Canadian Armed Forces (CAF) that will complement its current fleets.

Two teams are involved in the programme. Team SkyGuardian is led by General Atomics Aeronautical Systems (GA-ASI) and offers the MQ-9B SkyGuardian. Team Artemis is led by L3Harris Technologies and is offering the Artemis, a UAV based on Israel Aerospace Industries (IAI) Heron TP.

Following some delays, the Department of National Defence (DND) expects a contract to be awarded in FY2023-FY2024, with the first deliveries expected between FY2025-FY2027 and the final deliveries by FY3035 at the latest. The DND estimated the total contract value would be between C\$1 billion to C\$5 billion (\$790 million to \$3.93 billion). Based on this, Shephard estimates up to 81 units could be acquired by Canada.

EURODRONE (GERMANY, SPAIN, FRANCE, ITALY)

The European MALE RPAS programme was launched in September 2016. Germany, Spain, France and Italy had negotiated and agreed, in collaboration with the contracting authority, Organisation for Joint Armament Co-operation (OCCAR), the requirements and specifications for the UAV programme. These were also agreed with the prime contractor, Airbus Germany, and the significant sub-contractors, Dassault Aviation, Leonardo and Airbus Spain.

Following several delays, on 24 February 2022, the industry prime Airbus Defence & Space and the Organisation for Joint Armament Co-operation (OCCAR) signed a global contract to develop and manufacture 20 systems, 60 units, and five years of initial in-service support.

Germany is acquiring 21 units for an estimated \$3 billion, Italy 15 for an estimated \$2.210 billion and France and Spain are acquiring 12 each for an estimated \$1.716 billion respectively. The total funding for the entire four-nation programme is a reported €7.1 billion (\$8.56 billion).

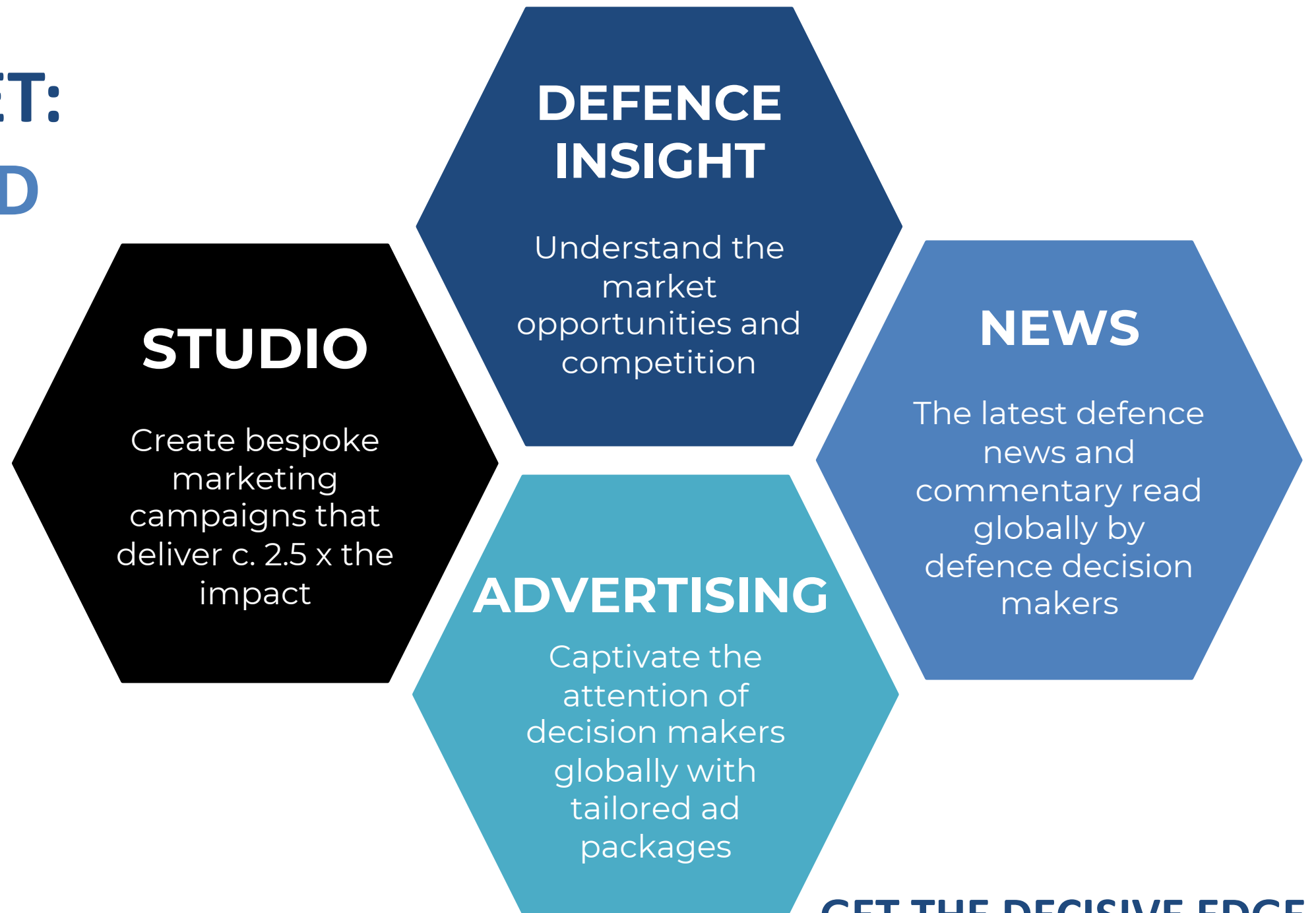


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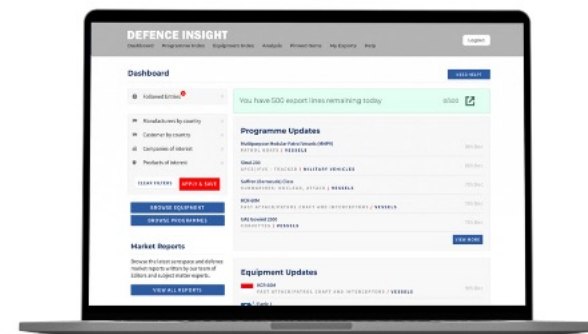
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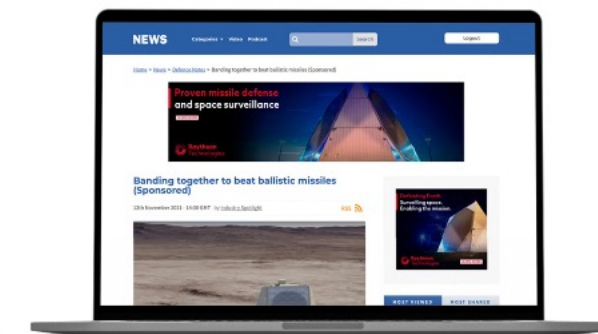
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