



THE SCORECARD:

Allied Preparedness in an “America First” World

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Avascent Analytics analyzes the defense spending of 60 countries in its Global Platforms and Systems (GPS) database. The GPS database covers approximately 95 percent of international defense investment spending that is accessible to Western defense suppliers. The database features a comprehensive “topline” forecast of each country’s total defense spending over a 10-year period, as well as a detailed “bottom-up” analysis of its program-by-program plans. Additionally, the Platforms Module of the GPS database captures the current inventory of global defense platforms, including aircraft, ships and ground vehicles for the 58 countries covered. For each platform captured, the Platforms Module details the prime contractor, the first and last year of delivery, the size of the installed base per customer, and the number of units to be acquired over a 10-year forecast.



“ An “America First” strategy would require key allies to overcome past reluctance to spend, to reconfigure their budgetary priorities and to increase investment in military capabilities the US traditionally supplied.

INTRODUCTION

The Trump administration intends to re-shape US military relationships in Europe and Asia-Pacific to shift the cost of collective security to America’s allies. In his February 2017 address to a joint session of Congress, President Trump called on longstanding allies to “take a direct and meaningful role in both strategic and military operations” and to “pay their fair share of the cost” of maintaining global stability, suggesting that the US may change both how it deploys its forces around the world and how it finances military operations. While the extent and pace of these changes remains to be determined, an “America First” strategy would require key allies to overcome past reluctance to spend, to reconfigure their budgetary priorities and to increase investment in military

capabilities the US traditionally supplied. This posture shift would require US allies across the board to spend more. Doing so, however, poses significant tests of political will, national budgets, and industrial base capacities of many nations. Some US allies must confront profound questions about national defense that they have not considered since the Cold War. Some allies would have to fund readiness to compensate for potential redeployment of US troops while others would have to purchase operational enablers such as intelligence, surveillance and reconnaissance (ISR) and mobility assets that the US traditionally operated on their behalf.

As US allies rethink their strategies considering new White House policies on

collective security, so too must aerospace and defense firms. The scenario explored here holds both opportunity and risk for defense suppliers. Increased defense spending by US partner nations will drive demand for equipment and services to various degrees, but a desire among those allies to reap maximum economic benefit will lead to fierce competition from indigenous suppliers. Understanding which new capabilities US allies will require -- and which they can afford -- is essential for government and industry.

While this scenario highlights the potential effects of US retrenchment, other factors threaten the existing structure of global alliances. As the UK considers its departure from the European Union and countries across Europe hold hotly contested elections, it will be crucial to understand the ability of nations to decrease their reliance on traditional guarantors of collective security.

A combination of factors from budget availability to the age of existing defense equipment will determine how difficult and costly it would be for individual allies to acquire the capabilities needed to shoulder a greater share of the burden for their own security. The pages that follow quantify these factors and describe how this transition could play out for nine crucial US allies in Europe and Asia-Pacific¹.

Six factors will determine the potential capability gap partner nations would face in this scenario:

- The presence of US forces
- The perception of the regional threat environment
- The current trajectory of defense budgets
- The political will to increase those budgets
- The strength of the indigenous industrial base
- The state of existing equipment

¹ To be sure, a change in US posture will have ramifications for operations and allies in the Middle East and the Americas, but this analysis focuses on the potential disruption of long-standing, formal multinational alliances and defense partnerships.



“ Europe’s current NATO and EU security framework embeds European countries in a broader security alliance that could facilitate pooling resources and pursuing joint procurements if there is an American shift.

EUROPE

After World War II, and through the subsequent Cold War, the United States emerged as the central pillar of Europe’s security architecture through NATO. From the Trump Administration’s perspective, NATO today represents the sort of free riding on American military spending that will no longer be tolerated by the White House. As in the Asia-Pacific, all European countries examined here stand to lose if the United States withdraws military support. Further, current EU cybersecurity policy counts on transatlantic support to help attribute cyber threats to specific states. A lesser US presence in both realms would be a shock, but not one felt equally across Europe. For example, France’s lack of a US military presence on its soil and the actions it is already undertaking to

bolster its capabilities in areas where it heavily relies on the US mean it is better positioned than Poland with its high threat environment and increasing reliance on the US for military support. However, unlike Asia’s hub-and-spoke system, Europe’s current NATO and EU security framework embeds European countries in a broader security alliance that could facilitate pooling resources and pursuing joint procurements if there is an American shift.

The following countries will be examined:

- France
- Germany
- Poland
- United Kingdom

France

OVERALL SCORE



9

THREAT ENVIRONMENT

6



Terrorism

An ongoing domestic terror threat is a clear concern



Overall Score for Each Country

EUROPE		ASIA-PACIFIC	
France	9	Australia	9
Germany	8	Japan	7
Poland	6	Philippines	4
UK	8	South Korea	6
		Taiwan	6

- Scorecard Scale**
- 1-3: Unprepared
 - 4-6: Partially prepared
 - 7-9: Prepared
 - 10: Very prepared

PLATFORM AGE (YEARS)

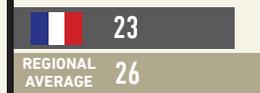
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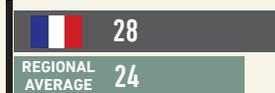
Airborne



Ground



Maritime



US PRESENCE

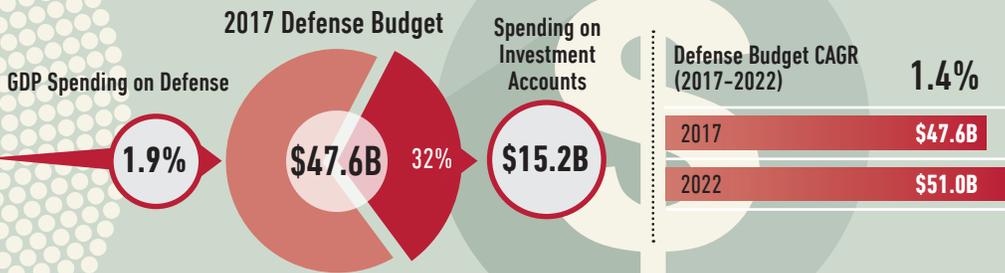
10



The US military provides crucial support to French troops overseas, although the French government foots the bill

BUDGET AVAILABILITY

10



INDUSTRIAL BASE

9

Percentages of Total Spending by Contractor Country/Region



POLITICAL WILL

10



French political support for a robust defense budget remains strong

Metric Definitions

- **Threat Environment:** Assessment of country's threat environment. Measures how significant of a threat country's regional environment poses. The greater the threat, the lower the score.
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FRANCE

France is better positioned for a diminished US presence relative to other European nations. It is already bolstering capabilities in areas where its reliance on the US is particularly high. A high domestic terror threat and active overseas operations mean that ISR and enabler capabilities, in particular, would be priorities.



Threat Environment 6

Although Russian aggression is not viewed as a pressing threat due to France's location and military force, domestic terror certainly is an issue. In recent years, France has endured some of the most frequent and violent terror attacks in Europe, a result of a deadly cocktail of historical conflict and intervention in the Middle East, Islamic extremism germinating in prison populations, and disenfranchised Muslim communities. Responding to these domestic terror threats with French military and Gendarmerie deployments around the country, coupled with drawn-out military engagements in Mali, is expensive for the French government. In this operational context, diminished American ISR and intelligence support overseas would leave a critical capability gap.



US Presence 9

France has long held an independent defense posture. The US has not held a permanent military presence in France since the last USAF C-117B "Super SkyTrain" left Orly Airport on May 31, 1967 as President Charles de Gaulle withdrew France from NATO's American-dominated military structure. Though France has since rejoined NATO's military command, France is the only NATO nation outside the alliance's Nuclear Planning Group and does not house any US troops or equipment within its borders. However, the US military provides crucial support to French troops overseas, although the French government foots the bill. Since 2013, the US military has provided airlift capabilities for French troops traveling to the Sahel, intelligence support, long-range UAV surveillance from drone bases in Africa, and refueling tankers for French aircraft. Further, the French Air Force was heavily dependent on US ISR and refueling capabilities during NATO engagements over Libya. Any similar overseas operations in the future may not have the same level of NATO-financed American support. Domestically, France receives US long-range ISR and satellite coverage, capabilities that France would need to prioritize if an "America First" strategy is carried out.



Platform Age 8

The average age of French military equipment hovers just below the regional average. This metric highlights France's willingness to maintain crucial platforms and programs through constant upgrades, new buys, and multinational efforts. The average age of military inventory directly correlate with efforts currently underway by the French Ministry of Defense. These efforts include the ambitious ground vehicle modernization program through 2030, new frigates and submarines for the Navy, and A400Ms, A330s, and Rafales for the Air Force. Relative to other European nations who partly (or wholly) rely on the US nuclear umbrella, France independently operates a nuclear program of over 300 warheads with frequent upgrades and planned funding far into the future.



Budget Availability 10

The defense budget in France is the second largest in Europe (behind only the UK). It is projected to reach nearly \$48 billion in

2017, and to grow at 1.4% per year through 2022. As France prioritizes new platform procurement and internal safety measures, it will spend over 32% of its defense budget on investment accounts (procurement and R&D). Including all measures of defense spending, France spends nearly 1.9% of total GDP on defense and ranks among the most significant contributors to NATO.



Political Will 10

In May, France will elect a new President in what promises to be one of the most dramatic elections in recent history. For all candidates, French political support for a robust defense budget remains strong. Many of the same factors that impact France's threat environment drive political and public support for a large defense budget and its continued growth into the future.



Industrial Base 9

The French industrial base is strong, with 82% of French contract value from 2012

“ Many of the same factors that impact France's threat environment drive political and public support for a large defense budget and its continued growth into the future.

to 2016 coming from local suppliers, and another 11.6% from neighboring European companies. A lesser US presence in Europe could even be a boon for French industry as other countries turn to the French industrial base to fill capability gaps. In lieu of US support in priority areas like long-range strike, ISR surveillance, and transport aircraft, France is well positioned to expand its already prominent domestic industry and leverage existing relationships with regional allies.



With a strong budget, political support for the armed forces, and durable military independence, France is well prepared to weather an “America First” foreign policy. An overall preparedness score of 9 highlights these strengths while acknowledging that France faces a difficult and complicated domestic terror threat that requires robust intelligence and surveillance capabilities.

“ With a strong budget, political support for the armed forces, and durable military independence, France is well prepared to weather an “America First” foreign policy.

Germany

OVERALL SCORE



8

THREAT ENVIRONMENT

8



Increasing Russian aggression shapes Germany's threat perception



Overall Score for Each Country

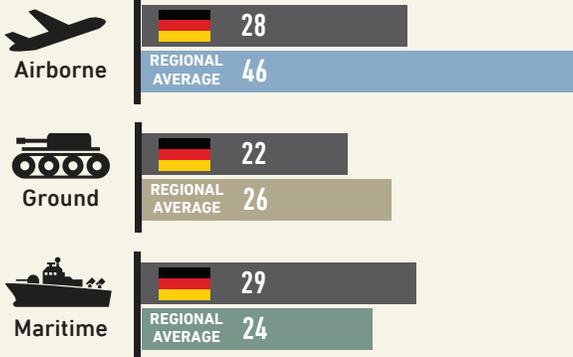
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Scorecard Scale

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PLATFORM AGE (YEARS)

5



US PRESENCE

8



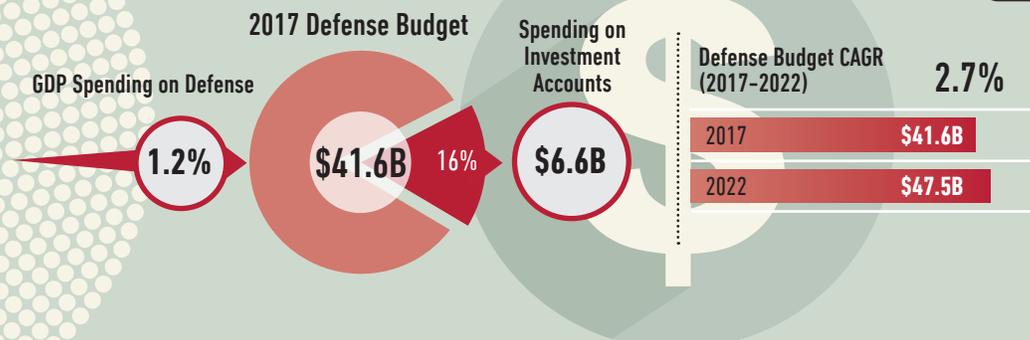
US troops in Germany provide assurance and deterrence for NATO more broadly, especially its eastern flank, and use German bases to deploy to other global areas of responsibility

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BUDGET AVAILABILITY

8



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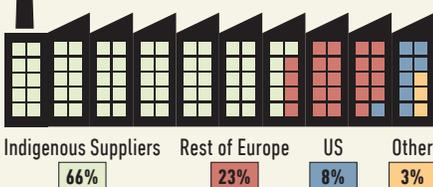
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INDUSTRIAL BASE

9

Percentages of Total Spending by Contractor Country/Region



POLITICAL WILL

7

Growing Russian aggression in Eastern Europe and continued calls from the US to spend more on defense has led to greater political will within the current German government to increase military spending

GERMANY

Germany has adapted to a reduced US military presence since the end of the Cold War, but a shift to an “America First” policy could pose challenges. The gaps that exist can reasonably be addressed, but only if there is sustained political support to continue increasing defense spending and the defense industrial base’s ability to fulfill a surge in demand.

Threat Environment 8

Germany’s threat environment score reflects Germany’s geographical position within Europe as well as its leadership role within the European Union and NATO membership. More than anything else, increasing Russian aggression shapes Germany’s threat perception. While Russia is not seen as posing an existential threat given Germany’s size and location in the center of Europe, there is growing concern over Moscow’s incursion into Crimea and

ongoing efforts to undermine the crucial political relationships at the core of the EU and NATO. Additionally, a recent spate of terror attacks within Germany have heightened the threat of domestic terror.

US Presence 8

Germany’s US presence score is based on the number of US troops still based in Germany and the deterrence capability they provide for Europe. The US has had a strong military presence in Germany since the end of World War II. Built on the promise of NATO’s Article 5 mutual defense pact, over a quarter million US troops were stationed in West Germany to deter Soviet aggression during the Cold War. Today there are around 50,000 American military personnel in Germany. Their mission is no longer expressly to defend Germany. Instead they provide assurance and deterrence for NATO

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more broadly, especially its eastern flank, and use German bases to deploy to other global areas of responsibility. In the past two years, as concern over Russian aggression has grown, the US has begun to once again deploy more combat equipment in Europe, prepositioning stocks in Germany that would enable the rapid deployment of US ground forces in response to contingencies throughout the region. More broadly, Germany benefits from access to US heavy airlift, refueling capabilities and ISR capabilities.



Platform Age 5

Germany's platform age score reflects two realities. First, efforts are already underway to acquire the kind of equipment that would be needed in the case of an "America First" policy shift such as A400M transport planes, a multinational fleet of A330 aerial tankers, and increased heavy armor. Second, the German military faces an ongoing struggle to maintain the readiness of the equipment already in inventory, which is on average older than its neighbors. For example, a November 2016 Bundeswehr report found that only 44% of all Tiger attack helicopters were operational. Addressing readiness issues with current platforms could limit how much can be spent on new capabilities.



Budget Availability 8

Germany has the third largest defense budget in Europe and its budget availability score is underpinned by a series of

performance indicators. Germany's defense budget is expected to grow 2.7% per year through 2022. While this is lower than growth rates in some other European countries, it is marked progress from only a couple of years ago when Germany's defense budget was exhibiting almost no growth at all. At the same time, Germany's defense spending only accounts for about 1.2% of its GDP. Given that this is well below NATO's goal of spending 2% of GDP on defense, Germany's defense budget would need to grow substantially before hitting that ceiling.



Political Will 7

Germany's political will score stems from a bifurcation in attitudes towards defense spending between the government and public polling. Given its history, Germany has been reticent about funding large defense budgets and placing too much emphasis on military participation. However, growing Russian aggression in the east and continued calls from the US to spend more on defense are not going unnoticed by German officials. There is an increase in political will within the current German government, from Chancellor Angela Merkel to Minister of Defense Ursula von der Leyen, to increase defense spending and move towards the 2% target. At the same time, Germany will hold federal elections in September, and Merkel's current junior coalition partner, the center-left SPD which does not show the same support for increased defense spending, is surging in the

polls. Additionally, a December 2016 poll found that two-thirds of Germans still oppose higher defense spending.



Industrial Base

9

Germany's successful and experienced defense industrial base underpins a high industrial base score. While increasing production capabilities to make up for the capability gaps caused by an "America First" policy could strain current industry capabilities, local and regional industry has the know-how to provide the necessary priority platforms that Germany would need including additional heavy airlift, refueling aircraft and heavy armor.

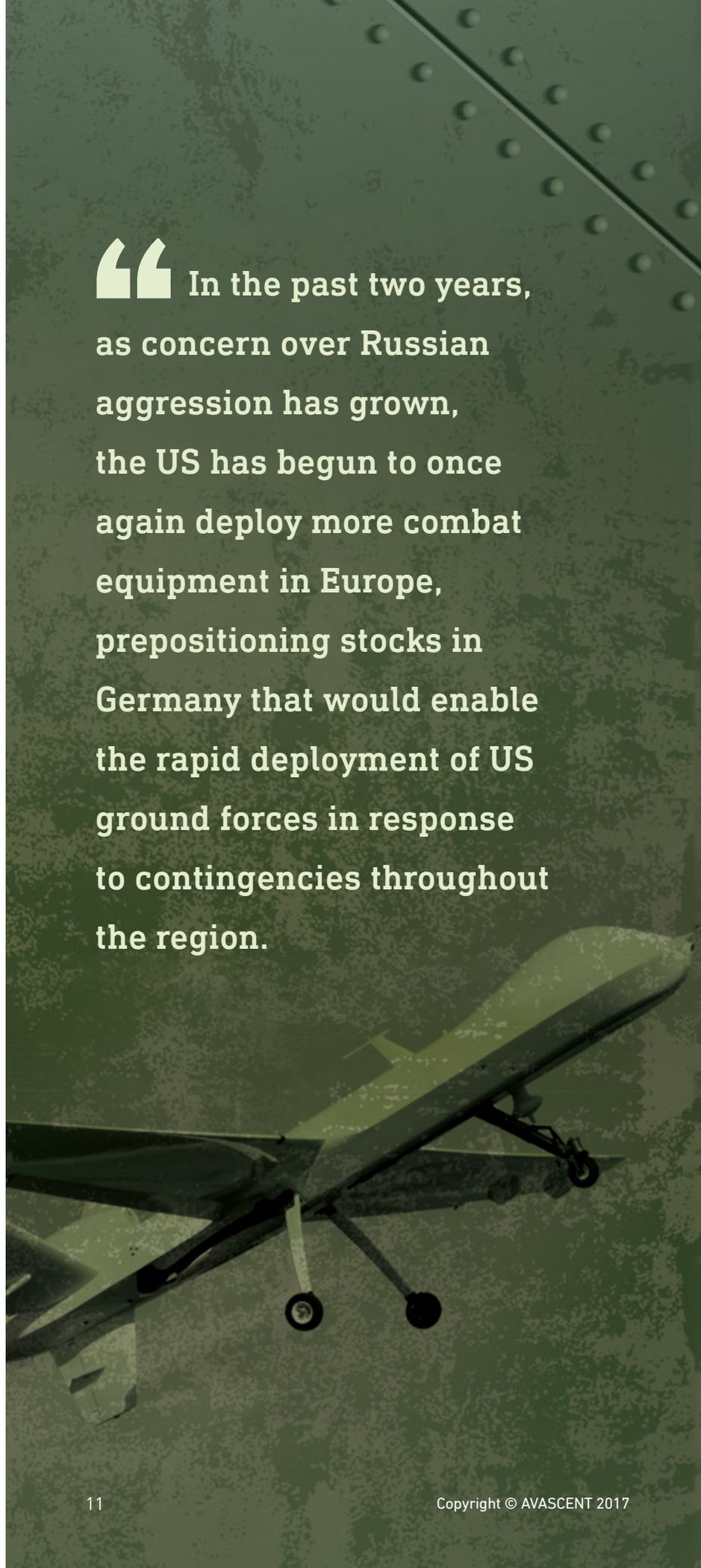


Overall Preparedness Score

8

Germany's overall preparedness score signals that while filling the gap in deterrence ability and airlift and refueling capability left by an "America First" policy would be challenging; its strong industrial base and substantial defense budget should be able to rise to those challenges.

“ In the past two years, as concern over Russian aggression has grown, the US has begun to once again deploy more combat equipment in Europe, prepositioning stocks in Germany that would enable the rapid deployment of US ground forces in response to contingencies throughout the region.



Poland

OVERALL SCORE



THREAT ENVIRONMENT

5



Polish officials view US soldiers' presence on Polish territory as a strong conventional deterrent to Russian aggression



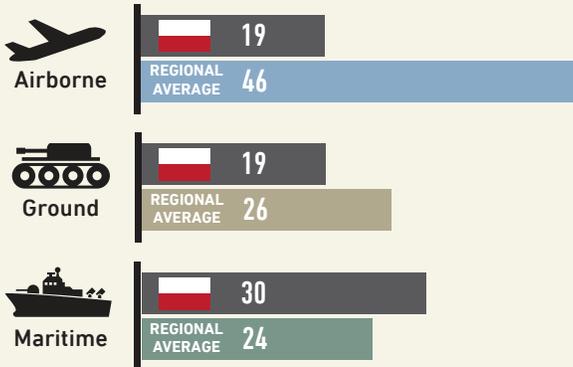
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UK	8	South Korea 6
		Taiwan 6

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PLATFORM AGE (YEARS)

7



US PRESENCE

4



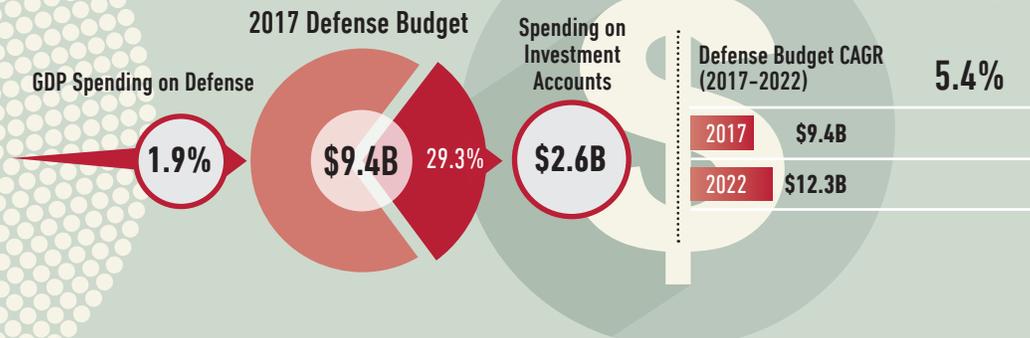
US soldiers are being welcomed with open arms by Polish officials who views the U.S.' presence on Polish territory as a strong deterrent to Russian aggression

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BUDGET AVAILABILITY

6



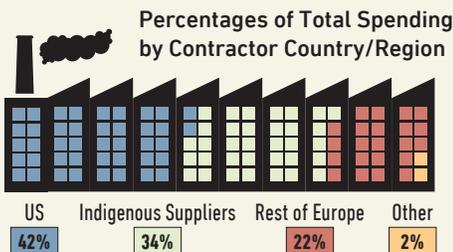
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INDUSTRIAL BASE

5



POLITICAL WILL

7

With Russia viewed as a major threat by both government stakeholders and the public, Poland can expect to receive support for increased defense spending

POLAND

Poland increasingly relies on the United States for a variety of military support, more so since regional Russian aggression ramped up in 2014. This support ranges from security assistance provided through the \$3.4 billion European Reassurance Initiative, air-defense capabilities such as the Aegis Ashore missile defense system that broke ground on Polish territory in May 2016, and the recent deployment of a US armored brigade to Poland through Operation Atlantic Resolve. Given this reliance, a US strategy that trades NATO participation or support for Russian political engagement prompts great concern among Polish officials warily looking east.

Threat Environment 5

It is no surprise that Russia's encroachment into Eastern Europe, especially following the annexation of Crimea in 2014, shapes Poland's threat environment score. Russia also stationed nuclear-capable Iskander missiles in Kaliningrad, a Russian enclave which borders Poland and Lithuania, in late 2016 as a response to NATO deployments to the region. This further aggravated the situation. Should an "American First" strategy include warming ties and shared interests with Moscow, Polish officials must watch that this

rapprochement does not come at their expense. Current and potential Russian actions in the region create a high threat environment for Poland and therefore lowers their score for this category.

US Presence 4

Under Operation Atlantic Resolve, close to 6,000 US troops deployed to Europe on a rotational basis in January 2017. It is the largest US deployment since the Cold War. Of those forces, 1,000 US soldiers will be stationed in northeastern Poland beginning in March 2017; they are being welcomed with open arms by Polish officials who views the US presence on Polish territory as a strong deterrent to Russia. Poland desires US troops to be permanently stationed on Polish soil. "America First" strategy is carried out.

Platform Age 7

Poland's platform age score derives from the low averages of airborne and ground vehicle platforms, both of which are just under 20 years. However, in the ground vehicle inventory newer Leopard 2A5s and Rosomak APCs are balancing out other older ground vehicles. Poland's maritime platforms average about 30 years in service. Furthermore,

the Ministry of Defense reviewed the nation's military modernization plans last fall and subsequently delayed the naval programs. Poland's Orka-class submarines, Miecznik-, and Czapla-class vessels have all been slipped by two years, likely due to financing other priorities. The average age of the country's maritime platforms, coupled with delayed naval modernization plans, prevents Poland from attaining a higher score in this category.

Budget Availability 6

In January 2017, the Polish government approved an increase to the 2017 budget to \$9.4 billion, reaching nearly 2% of GDP, as the country embarks on an ambitious modernization effort during the next five years. While other key performance indicators herald strong defense growth of 5.4% during the 2017-2022 timeframe, Poland's defense budget faces headwinds: slow GDP growth and competing social priorities of the Law and Justice Party. The Polish government has repeatedly stated that the defense budget will reach 2.2% of overall GDP by 2020 and 2.5% of overall

GDP by 2030, but any pledge of long-term sustainment of that level of spending should be viewed as questionable.

Political Will 7

Poland certainly exhibits the political will to increase defense spending as it is one of five NATO countries to already spend 2% of their GDP on defense. In late 2016, the Ministry of Defense overhauled the modernization plans laid out by the previous administration by delaying some programs and prioritizing new ones, most notably cyber defense and the volunteer Territorial Defense Force. Poland's Strategic Defense Review is expected to be released this spring and will provide a more detailed roadmap of changes in the modernization plans. During the next five years, Poland plans to spend \$19.4 billion on its military modernization plan, of which \$15.4 billion will go towards the top 15 programs. With Russia viewed as a major threat by both government stakeholders and the general public, Poland can expect broad support for higher defense spending. However, the defense budget

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will not be able to absorb substantial increases due to factors aforementioned in Poland's budget availability.



Industrial Base

5

Poland continues to develop its own defense industrial capabilities, as Avascent reported in its September 2016 article, "Poland's Defence Modernisation Plan: A Race Against Time." However, Poland still requires significant assistance from foreign companies to expand these capabilities. An "American First" policy could shift Poland's reliance from US-based defense firms to European companies. Politically, this could also lead to Poland pursuing stronger alliances with neighboring countries by offering concessions through defense contracts, such as on the naval modernization program. Poland's reliance on non-indigenous firms for their defense industrial base is primarily what drives their score of 5.

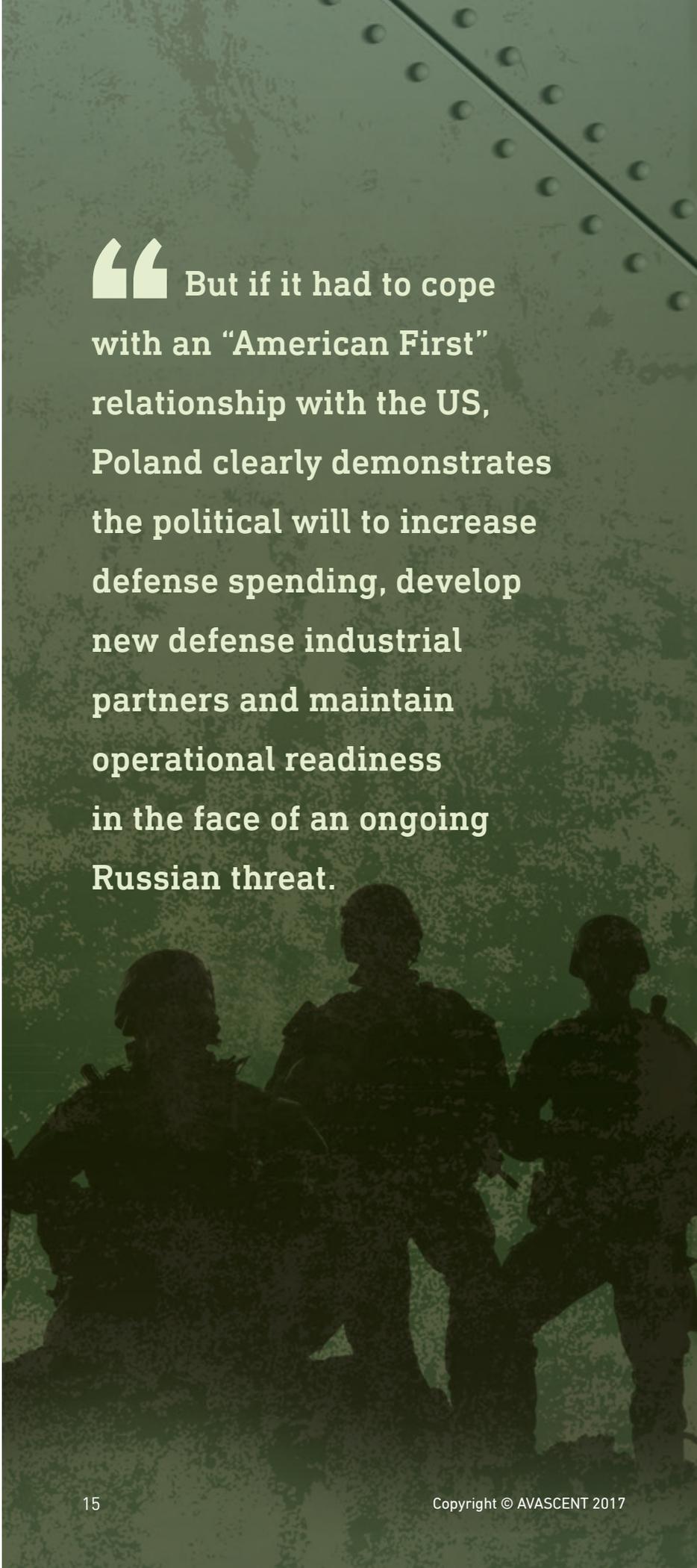


Overall Preparedness Score

6

Poland's overall preparedness score of 6 comes from a strong US presence under the NATO banner, inadequate defense industrial capabilities, and a high regional threat environment. But if it had to cope with an "American First" relationship with the US, Poland clearly demonstrates the political will to increase defense spending, develop new defense industrial partners and maintain operational readiness in the face of an ongoing Russian threat.

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United Kingdom

OVERALL SCORE



8

THREAT ENVIRONMENT

8



Domestically, the IRA represents an historic domestic terror risk while Islamic terrorism represents an emerging one



Overall Score for Each Country

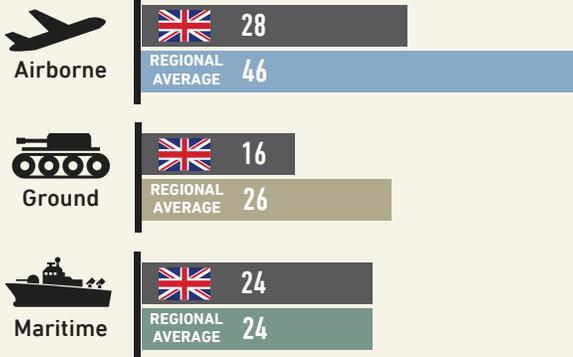
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PLATFORM AGE (YEARS)

8



US PRESENCE

8



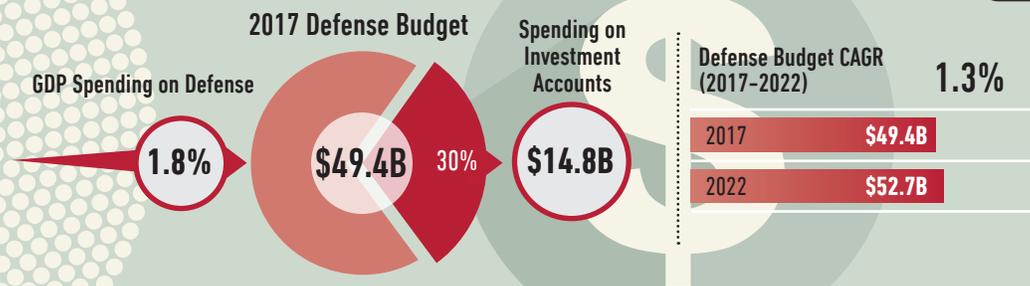
The US has a significant military presence in the UK with over 9,000 troops permanently stationed in Great Britain

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BUDGET AVAILABILITY

8



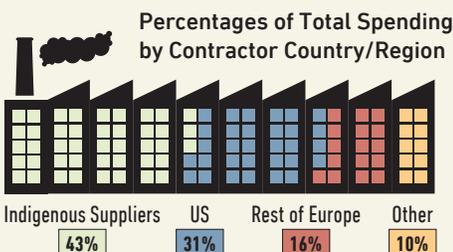
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INDUSTRIAL BASE

8



POLITICAL WILL

8

Despite the MoD's numerous efforts to maintain current funding levels, it is unclear how fluctuating exchange rates or GDP drops will change the budgetary environment

UNITED KINGDOM

British armed forces derive significant strength from the US, a meaningful military relationship cemented during the 20th Century. The two countries conduct numerous joint operations around the world, and the Ministry of Defence maintains close ties with US defense suppliers. The US-UK military partnership may face difficult obstacles with the advent of an “America First” foreign policy, such as forcing the British defense establishment to update its domestic capabilities at the same time it is grappling with withdrawal from the European Union.



The US has a significant military presence in the UK with over 9,000 troops permanently stationed in Great Britain. The overall priority for US forces remains to promote interoperability and military integration. This creates an environment where US and UK forces can freely conduct joint missions and operate in a cohesive manner abroad. A notable example is Afghanistan, where the US and UK are the largest contributors to the International Security Assistance Force. The two militaries consistently operate alongside each other in military and counterterrorism operations. Furthermore, this integration extends beyond ground forces. Numerous British pilots have flown aboard US aircraft carriers to gain valuable training focused on operating the F-35. UK Fleet Air Arm carrier personnel train aboard US carriers and amphibious assault ships, as well. Furthermore, the US Marines will operate at least one squadron of F-35s from the new Queen Elizabeth-class aircraft carriers to promote joint operations. This historic interoperability is built on a century of shared military interests and cooperation that could be jeopardized if the US prioritizes an “America First” foreign policy.



The UK's threat environment is composed of both internal and external threats. Domestically, the IRA represents an historic domestic terror risk while Islamic terrorism represents an emerging one. In the aftermath of the 2005 London attacks the UK overhauled its approach to fighting terrorism, though as the March 22nd attack in London showed, terrorism remains a significant threat. At the same time, increasing Russian aggression and questions of how to buttress the UK's ability to sustain deterrence in the Baltics is also shaping the UK's threat perception.



Platform Age 8

UK military inventory represents an interesting dichotomy. For example, aging Eurofighters are receiving upgrades to keep them in service until 2030 at least, while new aircraft carriers are about to begin sea trials. A larger defense budget will provide the UK with modern platforms, but many will not be available for many years, stressing current in-service programs. Despite this apparent transition period, the UK is clearly changing its mission focus. New naval platforms such as the Queen Elizabeth-class carrier, Type 26 frigate, and Astute-class submarine represent a return to blue water operations. These ships and submarines are designed for long-distance missions and will serve as the backbone for British power projection abroad. Additionally, when coupled with air and land programs such as the F-35B and AJAX scout, it is clear that UK military priorities are centered on creating an advanced, modular, and highly mobile force across all domains. At the same time, the platform recap programs are absorbing much of the budget, leading to concern about the ability to invest in future technologies such as autonomy and hypersonics.



Budget Availability 9

The UK military boasts Europe's largest defense budget, spending \$49.4 billion in 2017. Furthermore, the 2015 Strategic Defence and Security Review promises an extra GBP 12 billion of defense spending over the next 10 years. This boost comes

as the British military reaches a critical juncture with new platforms scheduled to come on line soon. Furthermore, the additional budget will allow the UK to re-attain the NATO goal of spending 2% of GDP on defense; it is currently at 1.8%.



Political Will 8

Before Brexit, many in the UK parliament believed that previous defense spending cuts may have hobbled the UK armed forces. This eventually led to an increased defense budget. However, Brexit has created doubts in some members of parliament about whether such spending is sustainable. Despite the Ministry of Defence's numerous pushes to maintain current funding levels, it is unclear how fluctuating exchange rates or GDP drops in Brexit's wake may change the budgetary environment.



Industrial Base 8

Despite a strong shipbuilding and ground vehicle industrial base, the UK is reliant on US platforms in key airborne sectors. While the F-35B is the most notable American acquisition, recent contracts for Boeing P-8s and AH-64Es illustrate the roles US systems play with UK airpower. Additionally, the UK's ISR fleet is entirely reliant on US aircraft. The RAF currently operates a mix of Northrup Grumman E-3Ds, Raytheon Sentinels, Boeing RC-135s, and General Atomics MQ-9 Reapers. Recent contracts such as the P-8 and AH-64E would likely face less complications due to an "America

First” strategy because these were finalized before the Trump administration came to power. However, potential replacements for retirement-ready ISR platforms may be affected. The UK would have solely European platforms to pick from if US suppliers were not accessible. Furthermore, the UK’s nuclear arsenal is almost entirely manufactured by Lockheed Martin. While the missiles are deployed on RN Vanguard-class ballistic missile submarines, they are housed and maintained in the US at King’s Bay, Georgia. This presents a particularly complex situation if the US were to pursue an extreme “America First” strategy. It is unclear how the supplier relations would change or if the UK would be able to house and maintain the current arsenal of Trident D-5 missiles. While the UK’s focus on increased defense spending and modernization does generate capabilities not wholly reliant on US support, the dependence on US airborne platforms and nuclear missile manufacturing creates potential uncertainty and risk for the Ministry of Defence.



Overall Preparedness Score

8

The UK’s industrial ties to the US and interoperability with American forces could create significant headwinds during an era of “America First” foreign policy. However, a growing defense budget, ambitious modernization plans, and thriving industrial base provide the UK with enough reserve to adequately weather a sea change in a historic relationship.

“ The US-UK military partnership may face difficult obstacles with the advent of an “America First” foreign policy, such as forcing the British defense establishment to update its domestic capabilities at the same time it is grappling with withdrawal from the European Union.

SUMMARY

Europe

	Overall Score	Remarks
France	 	<p>With a strong budget, political support for the armed forces, and durable military independence, France is well prepared to weather an “America First” foreign policy. An overall preparedness score of 9 highlights these strengths while acknowledging that France faces a difficult and complicated domestic terror threat that requires robust intelligence and surveillance capabilities.</p>
Germany	 	<p>Germany’s overall preparedness score signals that while filling the gap in deterrence ability and airlift and refueling capability left by an “America First” policy would be challenging; its strong industrial base and substantial defense budget should be able to rise to those challenges.</p>
Poland	 	<p>Poland’s overall preparedness score of 6 comes from a strong US presence under the NATO banner, inadequate defense industrial capabilities, and a high regional threat environment. But if it had to cope with an “American First” relationship with the US, Poland clearly demonstrates the political will to increase defense spending, develop new defense industrial partners and maintain operational readiness in the face of an ongoing Russian threat.</p>
United Kingdom	 	<p>The UK’s industrial ties to the US and interoperability with American forces could create significant headwinds during an era of “America First” foreign policy. However, a growing defense budget, ambitious modernization plans, and thriving industrial base provide the UK with enough reserve to adequately weather a sea change in a historic relationship.</p>



“ Given the nature of the hub-and-spoke system that the United States has developed in Asia, countries do not have a broader alliance framework to rely on if the United States’ posture shifts.

ASIA-PACIFIC

For more than 70 years the US military presence in the Asia-Pacific underpinned the strategic position of America’s allies. Through a series of bilateral alliances and mutual defense treaties, the United States provides partner nations in the Asia-Pacific a security architecture built on American force projection and nuclear deterrence. Additionally, as Chinese cyber capabilities loom, US support in cyber warfare, particularly for less developed countries, remains vitally important. Accordingly, all five of the Asian countries examined stand to lose if the United States decreases its presence in the region, though how much they will lose and how prepared they are for such a shift varies significantly. For example, Australia’s small US military presence and low threat environment mean it has much less to lose than

South Korea with its substantial number of deployed US forces and high threat environment. Given the nature of the hub-and-spoke system that the United States has developed in Asia, countries do not have a broader alliance framework to rely on if the United States’ posture shifts. In fact, in Asia the United States holds together nations that otherwise have competing issues. Absent a US presence, they would need to decide how to best defend their security and interests on their own.

The following countries will be examined:

- Australia
- Japan
- Philippines
- South Korea
- Taiwan

Australia

THREAT ENVIRONMENT

10



Australia faces a relatively low threat environment, thanks in large part to its geography



OVERALL SCORE



9

Overall Score for Each Country

EUROPE		ASIA-PACIFIC	
France	9	Australia	9
Germany	8	Japan	7
Poland	6	Philippines	4
UK	8	South Korea	6
		Taiwan	6

- Scorecard Scale**
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 - 7-9: Prepared
 - 10: Very prepared

PLATFORM AGE (YEARS)

8



US PRESENCE

8



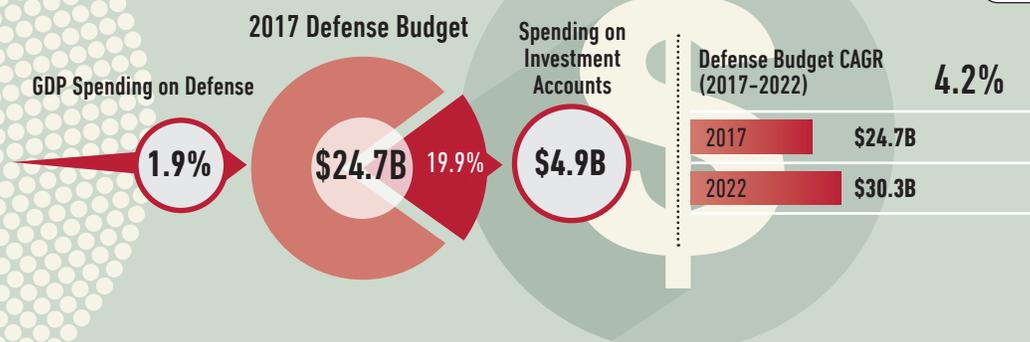
Australia acts as staging ground from which the US can operate its forces in the region

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BUDGET AVAILABILITY

10



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INDUSTRIAL BASE

8



POLITICAL WILL

8

Support grows among Australian officials for increased defense spending due to perceived decreases in regional stability

AUSTRALIA

Australia is well positioned to protect its national interests with its own defense resources and capabilities, although there would be a few specific gaps to close if its historic military partnership with United States deteriorates under new defense policies in Washington.

Threat Environment 10

With a relatively low threat environment owed to geography, Australia's primary security interests include the unobstructed flow of sea-based trade, preventing illegal migration via waters directly north of Australia, and maintaining the stability of neighboring Pacific island nations. Australia has already implemented effective policies to deal with the last two issues. Australian forces also regularly respond to significant regional humanitarian and disaster relief emergencies. The issue of unobstructed trade is vital to the Australian economy. Potential trade disruptions due to territorial disputes and military buildup in and around the South China Sea would have an impact on commerce with China, Australia's largest trading partner. However, due to Australia's geography, it is difficult to cut off sea lines of communication to and from Australia. While alternate routes to and from Australia would not be prohibitive,

a South China Sea conflagration would be detrimental to Australian trade.

US Presence 8

The US currently rotates a small force of 1,250 troops through Australia each year. Unlike other US troop deployments in the region, the forces are not stationed there to defend Australia from external attack. Rather, Australia acts as staging ground from which the US can deploy its forces in the region. A withdrawal of US forces would have little impact on Australian readiness or ability to defend its interests in the immediate vicinity. However, projecting power further north beyond the Indonesian archipelago and into the South China Sea would be difficult to sustain. Australia currently does not have any long-range strike aircraft platforms, though this will change with the planned introduction of a 300km ranged land-based missile system in the mid-2020s. Australia's own strategic airlift and sealift capability is limited and the Australian Defence Force would be hard-pressed to support a sustained operation far from home shores. Australia's Navy only has three landing ships and two replenishment ships in service, while the Air Force only operates eight C-17 strategic airlifters.



Platform Age

8

Australia's inventory of military equipment is relatively young. The average age will decrease even more as a wide range of aircraft, ships, and ground vehicles begin entering service in the 2020s. At present, the average age of all platforms in Australian service is roughly 16 years. The oldest platforms of note are Australia's F/A-18A/Bs, which entered service between 1985 and 1990. Several of these classic Hornets have already been replaced by Super Hornets in the 2000s, and even more will be retired with the arrival of F-35s between 2018 and the mid-2020s. Australia's high-profile submarine acquisition program will replace the Collins-class, launched between 1993 and 2001, making the average age just under 20 years.



Budget Availability

10

The 2016 Australian Defense White Paper laid out a clear plan to almost double defense investment by the mid-2020s. Annual defense spending is expected to

rise from about \$24 billion in 2016-17 to \$41 billion in 2025-26. It also plans for a force that would be well prepared to handle nearby contingencies. A downgrade of the US military relationship, or even outright loss of the US as a partner, would likely make further increased defense spending a priority. Fortunately for Canberra, the Australian economy is healthy enough to sustain some amount of emergency increases in military outlays. Longer term, not much would need to be changed from the current plan laid out in the 2016 Defense White Paper and 2016 Integrated Investment Plan.



Political Will

8

Popular support for increased defense spending has increased due to a perceived decrease in regional stability and a need to support a range of jobs and industries in Australia. The states of South Australia and West Australia have welcomed the jobs that come with increased defense spending and have pushed hard to have production of defense equipment performed in their states.

“ The average platform age will decrease even more as a wide range of aircraft, ships, and ground vehicles begin entering service in the 2020s.



Industrial Base

8

Although Australia does not design many of its own platforms, it has a robust and growing defense industrial base that has healthy ties with foreign suppliers. For instance, Australia's Hobart-class destroyers, Canberra-class LHDs, and future replenishment vessel (AOR-class) are all derived from Spanish Navantia designs. Several large foreign contractors, such as BAE Systems, Raytheon, and Thales, operate Australian branches to service the Australian Defence Force. Thus, Australia has manufactured several of its own ground vehicles such as the ASLAV IFV and Bushmaster PMV through Australian branches of foreign firms. The 2016 Defence White Paper also placed an emphasis on giving small Australian businesses more opportunities to enter the defense supply chain, led by the \$1.2 billion investment to establish the Centre for Defence Industry Capability, Innovation Hub, and Next Generation Technologies Fund. These three initiatives constitute a much more streamlined pathway for small and innovative firms to bring new capabilities to the defense industry.



Overall Preparedness Score

9

Australia is well prepared to defend its security and interest in its immediate regions using its own resources. While a downgraded partnership with the United States would make projecting power far from Australia difficult, Australia has a solid industrial base that can develop new capabilities.

“ While a downgraded partnership with the United States would make projecting power far from Australia difficult, Australia has a solid industrial base that can develop new capabilities.

Japan

OVERALL SCORE



THREAT ENVIRONMENT

8



North Korea is the most serious threat to Japanese security



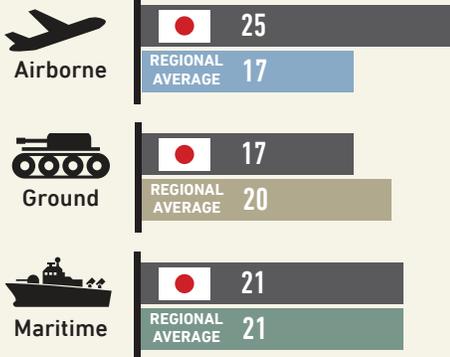
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PLATFORM AGE (YEARS)

8



US PRESENCE

6



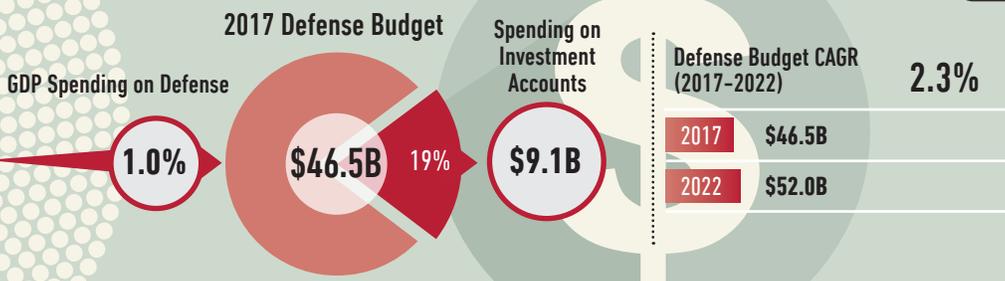
Japan hosts the largest American force in the Asia-Pacific, including about 50,000 personnel, 60-70 ships, and hundreds of aircraft

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BUDGET AVAILABILITY

5



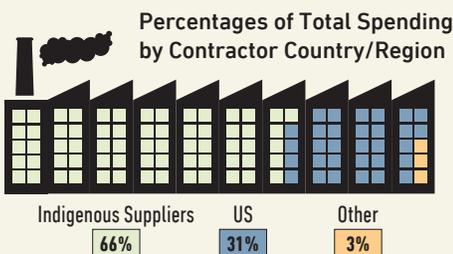
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INDUSTRIAL BASE

8



POLITICAL WILL

5

Rising regional tensions sees Japan's leaders willing to spend more on defense modernization and procurement

JAPAN

Japan hosts the largest number of US bases in the region and Tokyo relies heavily upon these forces, many of which are some of America's most advanced air and sea capabilities, for conventional deterrence against North Korea and China. A loss of the US military presence would lead to large gaps in the defense of Japanese territory. While Japan's own military and industrial base could make up for many of these gaps, doing so would be very costly and it would take a long time before these new Japanese Self-Defense Forces capabilities would be fully operational.

Threat Environment 8

North Korea is Japan's most serious security threat. North Korea's remarkable progress last year with its missile development, as well as two nuclear weapons tests, underscore the risk. Pyongyang's efforts to miniaturize its nuclear weapons for ballistic missile delivery only adds to these tensions. Although Japan has invested heavily in ballistic missile defense systems to protect itself from incoming missiles, these systems do not completely offset the missile threat posed by the numerous and increasingly advanced North Korean missiles. China presents the other major threat that Japan faces. Tension with China centers on territorial disputes in

the East China Sea. Japan is particularly worried about an amphibious landing in the disputed Senkaku Islands, which China also claims as the Diaoyu Islands. Ballistic and cruise missile attacks, carrier-based aviation, cyber-attacks, and a large submarine force, would be utilized against Japan in support of such a People's Liberation Army (PLA) operation. Yet both a Chinese landing on the Senkakus and a North Korean missile attack constitute low-probability/high-risk threats to Japan. Due to Japan's being an island nation, it must also concern itself with ensuring the free flow of trade through sea lines of communication, upon which the country relies. Rising tension from territorial disputes in the South China Sea and the PLA deployment of forces on islands in that sea have greatly raised the possibility of Japanese trade being obstructed. Although Japan's geography would allow its commerce to bypass the South China Sea without much difficulty in the event of an obstruction there, such a scenario would still be a significant drag on the Japanese economy.

US Presence 6

As the largest American force in the Asia-Pacific, the US military presence in Japan includes about 50,000 personnel, 60-70 ships, and hundreds of aircraft, that

are based on a wide range of facilities, including six air bases and two naval bases. This acts as a deterrent to potential attack from China and North Korea, and acts as a power-projection force that can protect mutual Japanese and American interests. Japan also benefits from American intelligence assets and ballistic missile defense in defending against and responding to North Korea's missile and nuclear programs. Japan relies heavily on these forces, which has allowed Japan to spend less on defense given the potential threat posed by North Korea and Japan. Although it is difficult to measure accurately, Japan pays about 75% of the cost of hosting American forces in Japan, the highest ratio of any US ally.



Platform Age 8

Japan fields a modern and advanced military, with an average platform age of about 22 years. Many of Japan's aircraft were delivered during the Cold War, which explains the large aircraft recapitalization that is underway with the F-35, P-1, C-2, and SH-60K programs. Shipbuilding and construction of ground vehicles are core Japanese industrial capabilities, and Japan keeps those industrial capabilities up to date through fielding new land and sea platforms. As an example, the Type 10 MBT is ready for production once the Type 90's 20-year build run ends. This pattern is also seen with the Soryu-class submarines following the 1990s era Oyashio designs a decade later.



Budget Availability 5

Although Japan has a large defense budget of over \$46 billion, spending is still heavily constrained by the country's stagnant economy. While Japan could increase its defense spending significantly, it would not be able to acquire as much equipment as another country could for the same increase in outlays. Foregoing domestic production would hurt jobs and jeopardize certain industrial capabilities, making such a scenario very unlikely.



Political Will 5

Japan has historically been very reluctant to increase defense spending. For the last several decades, Japanese defense spending has never surpassed 1% of GDP. But rising regional tensions make breaching the 1% of GDP threshold a possibility. However, the acquisition of certain capabilities, such as nuclear weapons and aircraft carriers, will likely remain political bridges too far. Even if Japan loses the US as a partner, the acquisition of nuclear weapons and aircraft carriers would face prohibitive political hurdles.



Industrial Base 8

Japan's defense industrial base is advanced, particularly in electronics, shipbuilding, and ground vehicles.

However, due to strict export laws, Japanese firms only produce equipment for the Japanese government. Thus, orders are generally small, raising costs significantly. A Japanese platform may be more than double the cost of a foreign version. Furthermore, defense revenue only makes up a small percentage of business for the Japanese firms producing this equipment. The government recently began promoting joint defense R&D efforts to try to bring down costs and revitalize the domestic defense industrial base. All told, Japan would be able to independently make up for gaps in US capabilities. But such an endeavor would be extremely costly and time consuming. Non-US defense suppliers would likely jump at the chance to supply Japanese forces should Japan-US relations change significantly. Yet some industrial areas would appear likely to remain local centers of expertise, such as shipbuilding and ground vehicles. Already, 85% and 95% of 2016 naval and maritime procurement spending respectively goes to Japanese firms, primarily Mitsubishi Heavy Industries, Kawasaki Heavy Industries, and Komatsu.



The image shows a dark rectangular box with a white square on the left containing a red circle (the Japanese flag). To the right of the square, the text "Overall Preparedness Score" is written in white. Further right, a white circle with a black border contains the number "7".

On its own, Japan would be able to provide a minimum level of defense, even against a high-end threat such as China. However, defending disputed territory and distant interests would be difficult for Japan to do on its own. The most significant security gaps would appear in these areas. While Japan can utilize its own defense industrial base to develop its own capabilities and make up for these security gaps, given the advanced and high consequence threats to its territory, developing the necessary capabilities will be extremely expensive and time-consuming. Accelerating development of stealth aircraft, ballistic missile defenses, long-range strike, and ISR aircraft and satellites, would be just some of the investment intensive initiatives that Japan would need to pursue.

“ While Japan can utilize its own defense industrial base to develop its own capabilities and make up for these security gaps, developing the necessary capabilities will be extremely expensive and time-consuming.

Philippines

OVERALL SCORE



4

THREAT ENVIRONMENT

6



The most high-end threat that the Philippines faces is comes from other regional power with competing territorial claims in the South China Sea



Overall Score for Each Country

EUROPE		ASIA-PACIFIC	
France	9	Australia	9
Germany	8	Japan	7
Poland	6	Philippines	4
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Scorecard Scale

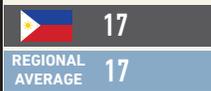
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PLATFORM AGE (YEARS)

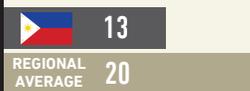
3



Airborne



Ground



Maritime



US PRESENCE

1



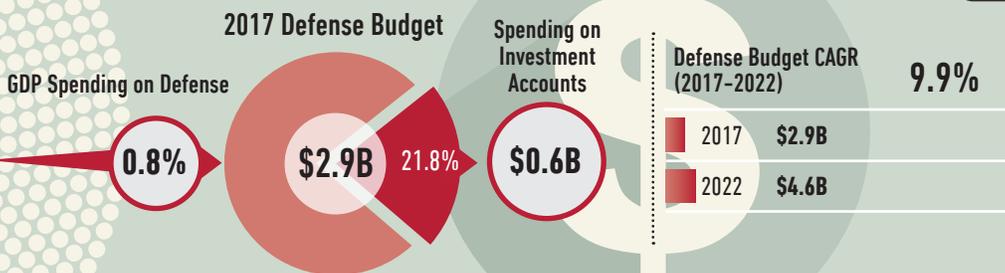
While the Philippines does not host a large number of US forces, it relies on alliance with the US for advisors, intelligence capabilities, and deterrence

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BUDGET AVAILABILITY

5



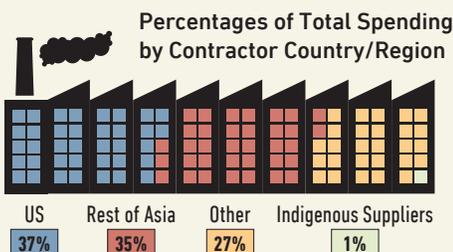
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INDUSTRIAL BASE

3



POLITICAL WILL

6

While Philippine officials want to bolster South China Sea claims and intensify counter-terror efforts, the willingness to significantly increase spending for such efforts is not particularly high

PHILIPPINES

The Philippines are the most budget constrained of any country covered in this paper. The nation also faces some of the biggest technical hurdles regarding military modernization. The election of President Rodrigo Duterte in June 2016, whose anti-Americanism has at times turned into fiery rhetoric, has led many to question the US-Philippine alliance's durability.

Threat Environment 6

The Philippines faces three threats to its security and economic position. The threat most likely to lead to open conflict comes from other regional powers with competing territorial claims in the South China Sea. China, Malaysia, and Vietnam contest ownership of strategically important reefs and islands also claimed by the Philippines. But unlike the Philippines, these three countries have submarines and advanced fighters to influence control of the disputed territories. The Philippines has also fought a long-standing insurgency in the southern portions of the country. Terror attacks and kidnappings remain frequent. The Philippine military still has not been able to bring these insurgent groups completely under control, even with US support. One of President Duterte's major platforms was his vow to refocus security efforts on stamping out insurgent

terrorist attacks. Despite this pledge, there have been mixed messages coming from the President, creating a jumbled approach to international relations. Yet the most catastrophic threat the Philippines faces is not military. The country is one of the most natural disaster prone countries in the world and suffers direct damage in the hundreds of millions, sometimes billions, of dollars every year. The indirect costs that come from displaced people, destroyed infrastructure, and disrupted economic activity, exact a heavy toll.

US Presence 1

While the Philippines do not host many US forces, it relies on its US alliance for its advisors, intelligence capabilities, and deterrence. While the US doesn't patrol claimed waters and airspace, any nation attempting to forcibly seize this disputed territory must consider the possibility that the US will intervene militarily. This would effectively provide the Philippines with air and naval power that it does not have. Its Air Force lacks fighter aircraft and its Navy does not have a missile or torpedo capability. Consequently, the Armed Forces of the Philippines (AFP) cannot credibly defend claims in the South China Sea. In counterinsurgency operations, the AFP benefits from intelligence, advisors, and training from US forces. Philippine

Defense Secretary Delfin Lorenzana has noted the value of US-operated drones, and said that he would ask US troops to leave once the Philippines acquired the same intelligence-gathering capabilities. This is in reference to President Duterte's now infamous 2016 statement that he wanted all US forces out of the Philippines within two years. Whether this will happen is unclear, again due to mixed messages the military and the President. But perhaps the most important benefit the Philippines receives from the US is a massive and robust humanitarian assistance/disaster relief (HA/DR) force. The AFP does not have the logistical capacity to undertake such large HA/DR missions, and US forces repeatedly play frontline roles helping the Philippines recover from its frequent natural disasters.



Platform Age 3

Although the AFP has been gradually buying new platforms over the past decade, it still relies on a wide range of old systems, particularly second-hand vessels for its Navy. Out of all the countries surveyed in this report, the Philippine Navy has the oldest vessels, at an average age of 35 years. Several vessels in service even date back to World War II. Across the entire AFP, the average platform age is about 22 years old. But many of these platforms are low-end second-hand platforms and are poorly maintained. New platforms about to enter service, like the 12 FA-50 light fighters, 2 Tarlac-class LPDs, and 2 Korean-built frigates, go only a short way toward modernizing the force.



Budget Availability 5

The Philippine defense budget is very constrained as economic development is the top national priority. Defense spending made up only 0.8% of GDP or 4.4% of government spending in 2016. President Duterte has also placed higher importance on internal security, pushing to have funds shifted from high-end systems towards lower-end systems, such as light close air support aircraft and night vision, that would be more useful in counterinsurgency operations. Overall, the Philippine defense budget will rise and fall largely depending on the performance of the overall economy.



Political Will 6

While Philippine officials have expressed a desire to bolster South China Sea claims and intensify counter-terror efforts, military spending has yet to rise to match that ambition. Economic and social programs constitute about 75% of the proposed 2017 national budget, whereas defense receives about 4.9%.



Industrial Base 3

The Philippines does not have a large defense industrial base to domestically produce equipment for its military. There are some firms, such as Armscor, that manufacture firearms and ammunition that are used by the AFP. Although the Philippines has a program called the

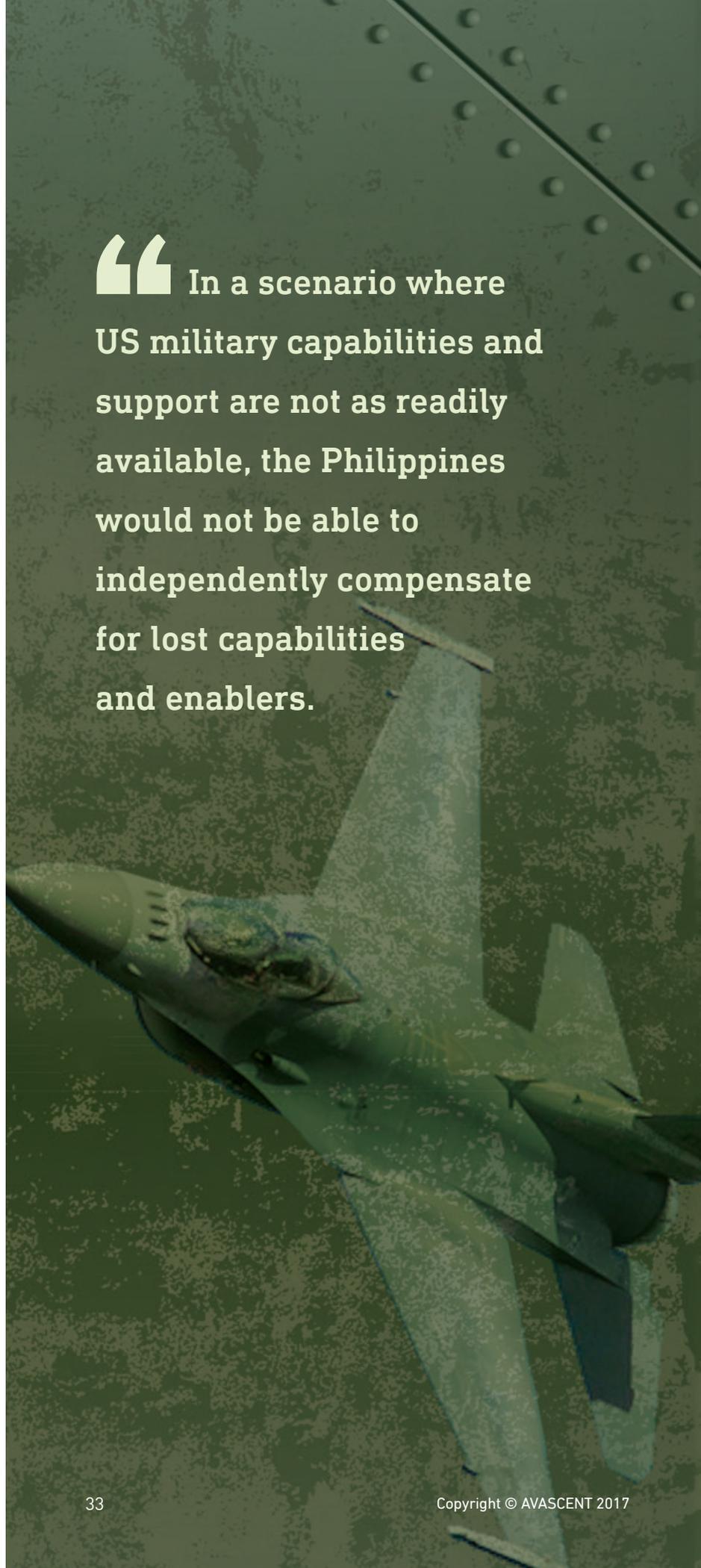
Self-Reliant Defense Posture (SRDP) that is tasked with boosting indigenous industry, the program has been neglected and was only recently revitalized. As such, the Philippines has historically relied on the US to supply its military equipment. With his anti-US rhetoric, President Duterte positions the nation at a procurement crossroads: continue to buy American arms or switch to new suppliers, particularly China and Russia. Furthermore, purchases of more advanced platforms that could come with technology transfers to grow the domestic defense industrial base appear to be less likely, no matter the nation. President Duterte's focus on internal security drives his vocal distaste for expensive high-end systems such as the South Korean FA-50 aircraft currently on order.

A dark rectangular box containing the Philippine flag on the left, the text "Overall Preparedness Score" in white, and a white circle with the number "4" on the right.

 Overall Preparedness Score 4

In a scenario where US military capabilities and support are not as readily available, the Philippines would not be able to independently compensate for lost capabilities and enablers. Even purchases of cheaper Russian and Chinese systems would not immediately address obsolescence, training, or budget issues.

“ In a scenario where US military capabilities and support are not as readily available, the Philippines would not be able to independently compensate for lost capabilities and enablers.



South Korea

OVERALL SCORE



6

THREAT ENVIRONMENT

5



South Korea continues to face an existential conventional and nuclear threat from the Democratic People's Republic of Korea



Overall Score for Each Country

	EUROPE	ASIA-PACIFIC
France	9	Australia 9
Germany	8	Japan 7
Poland	6	Philippines 4
UK	8	South Korea 6
		Taiwan 6

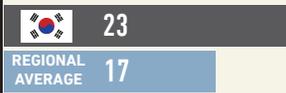
- Scorecard Scale**
- 1-3: Unprepared
 - 4-6: Partially prepared
 - 7-9: Prepared
 - 10: Very prepared

PLATFORM AGE (YEARS)

8



Airborne



Ground



Maritime



US PRESENCE

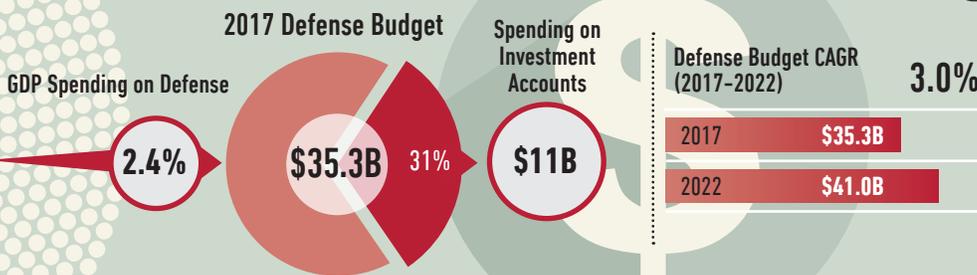
1



US forces in South Korea support the 1953 Mutual Defense Treaty between the US and South Korea, which provides for the defense of both nations against external armed attack

BUDGET AVAILABILITY

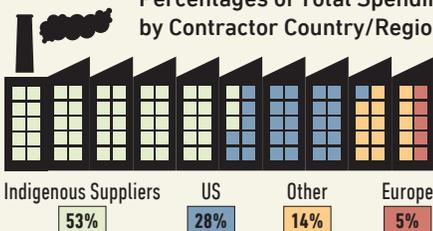
8



INDUSTRIAL BASE

5

Percentages of Total Spending by Contractor Country/Region



POLITICAL WILL

8

General consensus among South Koreans consolidates around a willingness to continue prioritizing spending on national defense and security

Metric Definitions

- **Threat Environment:** Assessment of country's threat environment. Measures how significant of a threat country's regional environment poses. The greater the threat, the lower the score.
- **Platform Quality:** Assessment of average age of country's airborne, maritime and ground platforms using GPS database. Measures average age of existing inventory, with the assumption that any effort to replace US capabilities will include improving existing capability first, and will impact future replacements of old platforms. The older the inventory, the lower the score.
- **US Presence:** Assessment of how many capabilities the US currently provides to country. Measures the requirement gap that would be left behind by a diminished US presence. The greater the US presence, the lower the score. [Soldier icon: US personnel stationed in country. AMD icon: US ground systems in country. Aircraft icon: US enablers used.]
- **Budget Availability:** Assessment of size and growth of country's defense budget, what percentage of country's GDP is going to defense and what percentage of defense budget is allocated to investment accounts using GPS database. Measures the ability of country's defense budget to increase to absorb increased spending pressures. The lower the four indicators are, the lower the score.
- **Industrial Base:** Assessment of country's indigenous defense industrial base. Measures the strength of country's industrial base and whether it could fill its requirement gap through its own industry. The less developed the industrial base, the lower the score.
- **Political Will:** Assessment of country's current political will to increase defense spending if necessary. Measures the likelihood of country's defense budget increasing to absorb increased spending pressures. The lower the political will, the lower the score.

SOUTH KOREA

South Korea's near-term ability to make up for reduced American support or forward-deployed presence would likely fall short given just how large a role US forces play in defending the nation.

Threat Environment 5

South Korea continues to face an existential threat from North Korea. Seoul, South Korea's capital, economic hub, and home to over 40 percent of the country's population faces an existential conventional threat from the mass concentration of mortars, rockets, and short-range missiles less than 50 miles away as well as the growing North Korean nuclear threat across the border.

US Presence 1

The 1953 Mutual Defense Treaty between the United States and South Korea provides for the defense of both nations in response to external armed attack on either. The treaty has served as a geopolitical force stabilizer on the Korean Peninsula, deterring further North Korean aggression by guaranteeing American engagement in any future conflicts. Currently, there are 28,500 American servicemen and women stationed in South Korea. A crisis on the Korean Peninsula

would also make available significant American assets concentrated in the Pacific, including personnel, hardware, and logistics infrastructure based in Japan. Most critically, South Korea would be able to call upon the force projection abilities of an American carrier strike group and strategic bomber fleets, advanced airborne and space-borne intelligence, surveillance, and reconnaissance (ISR) assets, and high-end ballistic missile defense capabilities. The score for this category reflects the near-impossible gap to close due to significant in-country and regional military support from the US.

Platform Age 8

Since 1988, South Korea has embarked on a series of concerted efforts to modernize its armed forces, shifting away from its personnel-heavy, ground warfare-centric model to a more advanced and professional force. For example, South Korea's Navy launched a series of major indigenous naval combatant construction programs, and its Air Force re-capitalized its fleet of front-line fighter aircraft. Taken together, these capital acquisition programs demonstrate a sustained effort to upgrade and modernize the armed forces. Few major capabilities require immediate attention or are past due for replacement. Besides Japan, South

Korea represents the most ready-to-fight force in the broader Asia-Pacific region.

 **Budget Availability** 8

The Republic of Korea spent a total of \$190.8 billion on defense between 2011 and 2016 – the fourth-highest level in Asia-Pacific. Spending is forecast to increase by approximately five percent per annum over the next five years as the Ministry of National Defense finalizes the Korea Air and Missile Defense (KAMD) System in response to heightened North Korean ballistic missile testing activity. The country’s current ability to meet the identified needs of its armed forces appears to be relatively healthy. However, at the current projected rate of defense spending growth, South Korea would be unable to fulfill its military’s modified requirements absent current levels of US support.

 **Political Will** 8

The immediate existential threat provided by its hostile northern neighbor has generally left spending on national defense

and security “untouchable.” Since 1988, defense spending has increased relative to spending the previous year every year except 1999. Consensus among South Koreans consolidates around a willingness to continue prioritizing spending on national defense and security and increasing it to match the threat level. Compulsory military service laws for all able-bodied males between the ages of 18 and 35 remain equally unassailable.

 **Industrial Base** 5

South Korea’s defense industrial base has matured to the point it can fulfill the majority of its domestic customers’ outstanding requirements. But, it has struggled in the aerospace domain to replicate crucial 21st Century technologies, particularly for 4.5-generation fighter aircraft. A domestically produced 5th-generation fighter akin to an F-35 or F-22 remains out of reach for at least another decade, if not longer. Likewise, South Korea’s Navy’s surface combatant fleet still lacks ship-borne ballistic missile defense capabilities critical to tracking North Korean missiles. Additionally, the country

“ The immediate existential threat provided by its hostile northern neighbor has generally left spending on national defense and security “untouchable.”

would lag for several more years in its long-range strike ability. A reduced US presence would not automatically cut off Seoul's ability to purchase American-origin defense systems; American defense companies would likely continue to do business in Seoul. Yet the degree of dependence that South Korea has built on American support in a crisis would mean that local industry would not be capable in replacing many of the lost assets for another generation.



If South Korea quickly had to adopt an independent defense posture, it would need to prioritize air defense capabilities surrounding Seoul. The country would also significantly bolster its ground forces on the 38th Parallel, as well as its cross-border surveillance efforts. Local industry would have no difficulties satisfying these immediate requirements and over the longer term, Seoul would be able to marshal broader resources. However, domestic defense companies would still require substantial time and investment to meet the country's need for advanced airborne and maritime surveillance capabilities, ballistic missile defense systems, and long-range strike capabilities previously provided by the United States. Further, it is also possible that Seoul could seek its own nuclear arsenal. Beyond the profound geopolitical complications this would cause in the region, a South Korean nuclear program would consume resources otherwise used for conventional military priorities.

“ Domestic defense companies would still require substantial time and investment to meet the country's need for advanced airborne and maritime surveillance capabilities, ballistic missile defense systems, and long-range strike capabilities previously provided by the United States.

Taiwan

OVERALL SCORE

6

THREAT ENVIRONMENT

5

Armed Conflict

Taiwan operates in an acute conventional threat environment, as China holds fast to the "One China" principle

PLATFORM AGE (YEARS)

Airborne

20
REGIONAL AVERAGE 17

Ground

25
REGIONAL AVERAGE 20

Maritime

35
REGIONAL AVERAGE 21

US PRESENCE

The US military presence in the Asia-Pacific region is paramount to the security of Taiwan

3

BUDGET AVAILABILITY

GDP Spending on Defense

2.1%

2017 Defense Budget

\$11.1B

28%

Spending on Investment Accounts

\$3.1B

Defense Budget CAGR (2017-2022)

2017 \$11.1B

2022 \$18.2B

10.5%

INDUSTRIAL BASE

Percentages of Total Spending by Contractor Country/Region

4

Country/Region	Percentage
US	66%
Indigenous Suppliers	14%
Europe	14%
Other	6%

POLITICAL WILL

General support from political leaders exists for spending on new military hardware and upgrades to existing platforms

8

Overall Score for Each Country

	EUROPE	ASIA-PACIFIC
France	9	Australia 9
Germany	8	Japan 7
Poland	6	Philippines 4
UK	8	South Korea 6
		Taiwan 6

Scorecard Scale

- 1-3: Unprepared
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TAIWAN

Taiwan's military and national strategy is predicated on the deterrence power of US forces in the region. Replacing this pillar with domestic capabilities could prove to be infeasible, leaving military planners with a difficult new paradigm.



Threat Environment 5

Traditionally, Taiwan has existed in a tense threat environment because China holds the "One China" principle as non-negotiable. China does not recognize the state of Taiwan and views it as a breakaway province. In the past, the US has recognized the "One China" position but does not acknowledge the Peoples Republic of China's (PRC) sovereignty over Taiwan. While it is unclear how the Trump administration will change US-Taiwan relations, without a US military bulwark, China would become the dominant power in the region and would likely create a hostile environment towards Taiwan.



US Presence 3

The US military presence in the Asia-Pacific region is paramount to the security of Taiwan. While the US no longer operates bases in Taiwan, American forces based elsewhere in the region are able to provide a deterrent presence as they have traditionally been able to rapidly respond to head off Chinese provocation. With a US power vacuum in the Asia-Pacific, Taiwan would struggle to maintain its military standing, if not its independence.



Platform Age 6

Taiwanese military inventory represents a clear bias towards airborne platforms. For example, the F-16 and F-CK aircrafts have been kept mostly up-to-date with significant avionics and airframe upgrades. With an average age of 20 years, Taiwan's airborne fleet is similar,

“ Taiwan's military and national strategy is predicated on the deterrence power of US forces in the region.

if not better, than others in the region. However, ground vehicles and maritime platforms have an average age of 25 and 35 years respectively making them some of the oldest in the region. Aging heavy armor and submarines are the primary platforms in need of replacement. As other nearby nations acquire new platforms, Taiwan will be hard-pressed to keep up with its military inventory.

Budget Availability 7

Taiwan's spent \$11.1 billion on defense in 2017, reflecting steady growth of 2% a year from 2016-2021. There is a general understanding between the Ministry of National Defense and President Tsai Ing-wen's administration that increased defense spending is vital to the security of the island.

Political Will 8

The heightened threat environment from an increasingly militarily capable China places greater emphasis on

defense spending. Political will mostly supports buying new military hardware and upgrading existing platforms. An "America First" strategy may even generate greater interest in accelerating current Taiwanese modernization plans.

Industrial Base 4

Taiwan has a growing domestic shipbuilding and aircraft industry, but the nation is nearly a generation behind its competitors. For example, after multiple failed attempts to procure foreign-built submarines, the Taiwan-based China Shipbuilding Corporation recently began developing the nation's first indigenously built submarine. The program is expected to face significant delays as Taiwan's inexperience with submarine construction takes a toll. Additionally, Taiwan's Aerospace Industrial Development Corporation produces the F-CK-1A (a multi-role fighter akin to the F-16). However, even the newest variant lacks many of the capabilities that non-stealthy fighters require to be effective, or even survivable, in the Asia-Pacific. An "America First"

“ An “America First” foreign policy could require Taiwan to ramp up its domestic defense industrial base more rapidly than may be feasible.

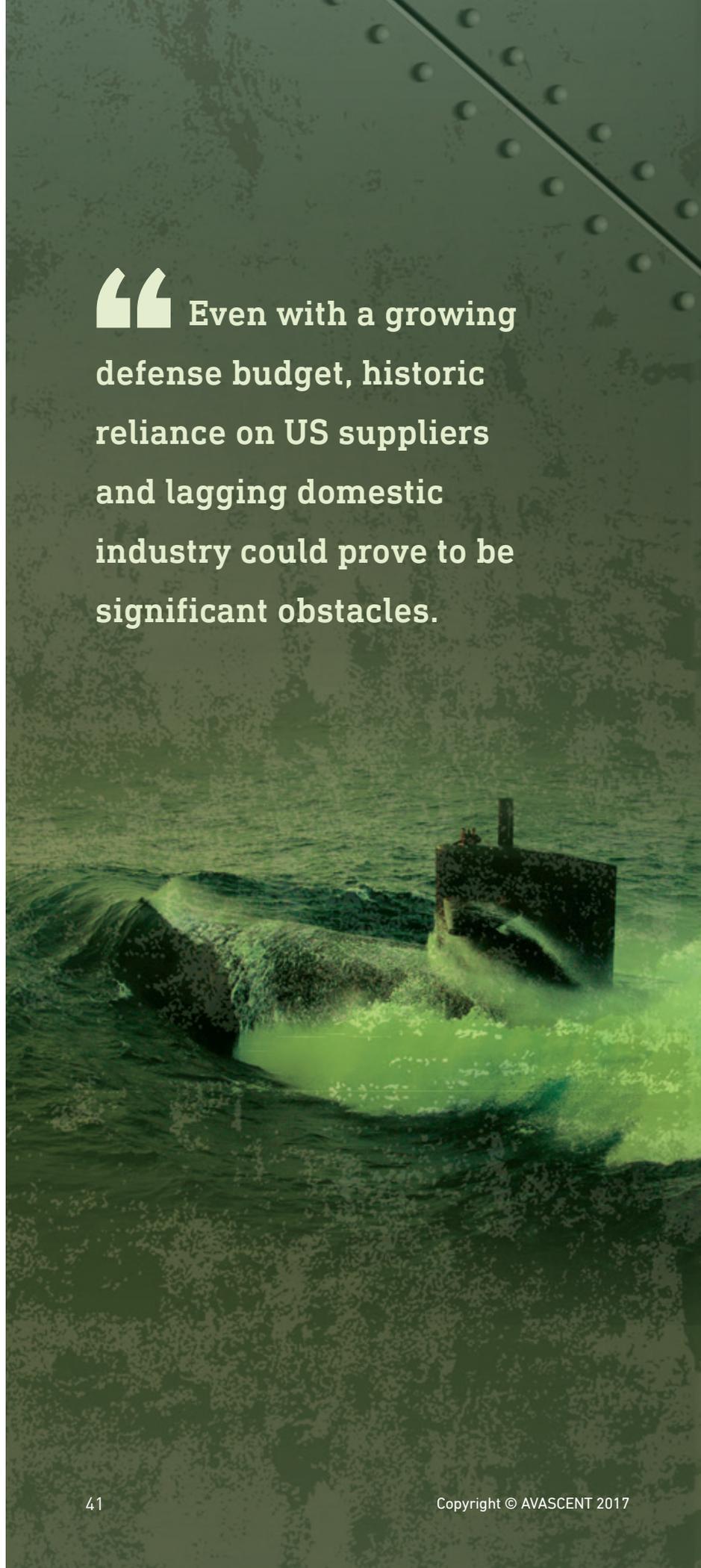
foreign policy could require Taiwan to ramp up its domestic defense industrial base more rapidly than may be feasible.

A graphic element for the Overall Preparedness Score. It features a small flag of Taiwan on the left, followed by the text "Overall Preparedness Score" in white on a dark background. To the right is a white circle containing the number "6".

Overall Preparedness Score 6

While the Trump administration may seek to change the dynamics of cross-strait relations, it remains clear that Taiwan could face numerous challenges in an “America First” era even if it desires to close those any capability gaps on its own. Even with a growing defense budget, historic reliance on US suppliers and lagging domestic industry could prove to be significant obstacles.

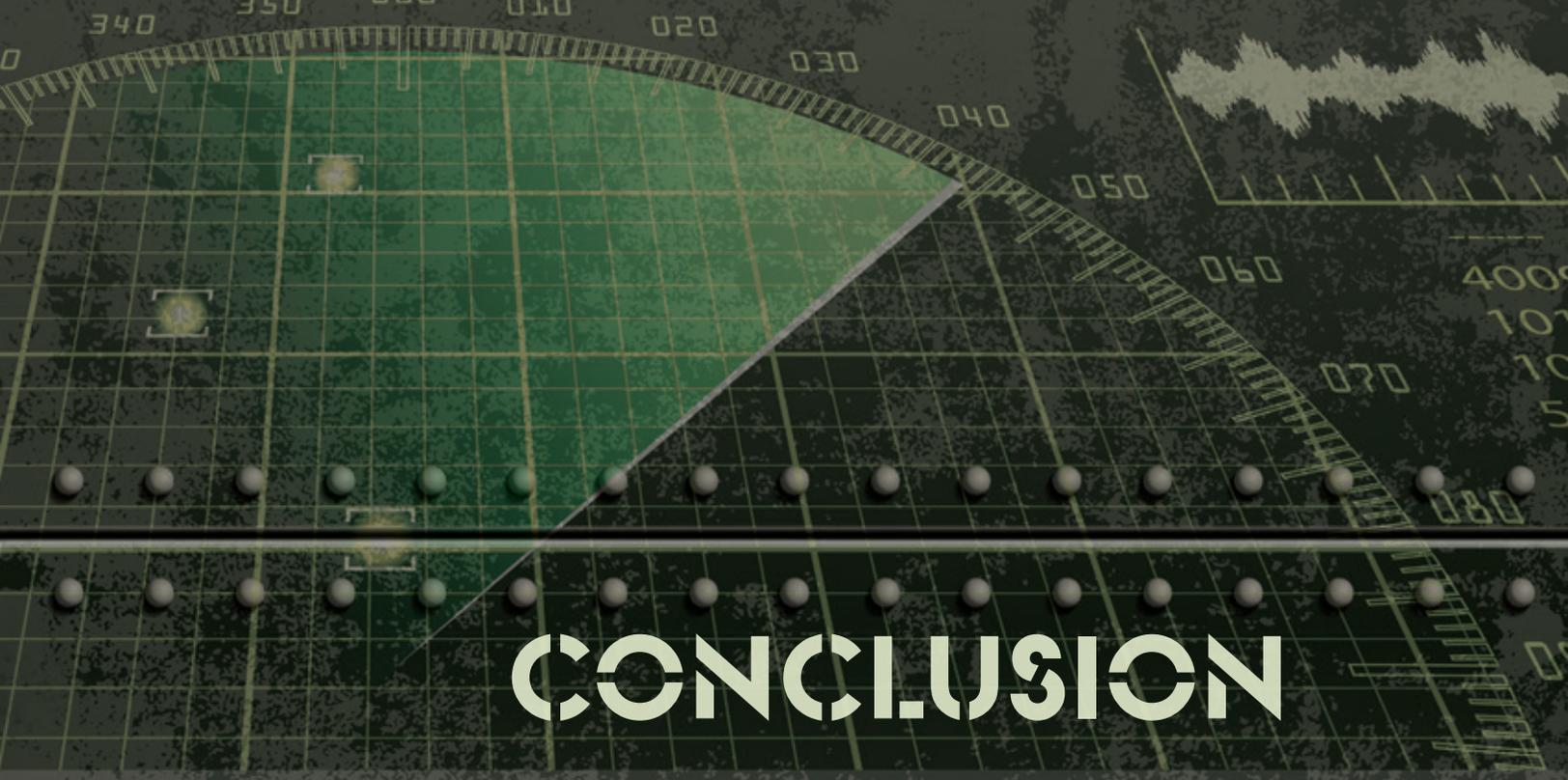
“ Even with a growing defense budget, historic reliance on US suppliers and lagging domestic industry could prove to be significant obstacles.



SUMMARY

Asia-Pacific

	Overall Score	Remarks
Australia	 	Australia is well prepared to defend its security and interest in its immediate regions using its own resources. While a downgraded partnership with the United States would make projecting power far from Australia difficult, Australia has a solid industrial base that can develop new capabilities
Japan	 	Japan would be able to provide a minimum level of defense, even against a high-end threat such as China. However, defending disputed territory and distant interests would be difficult for Japan to do on its own. Accelerating development of stealth aircraft, ballistic missile defenses, long-range strike, and ISR aircraft and satellites, would be just some of the investment intensive initiatives that Japan would need to pursue.
Philippines	 	In a scenario where US military capabilities and support are not as readily available, the Philippines would not be able to independently compensate for lost capabilities and enablers. Even purchases of cheaper Russian and Chinese systems would not immediately address obsolescence, training, or budget issues.
South Korea	 	If South Korea quickly had to adopt an independent defense posture, it would need to prioritize air defense capabilities surrounding Seoul. The country would also significantly bolster its ground forces on the 38th Parallel, as well as its cross-border surveillance efforts.
Taiwan	 	While the Trump administration may seek to change the dynamics of cross-strait relations, it remains clear that Taiwan could face numerous challenges in an “America First” era even if it desires to close those any capability gaps on its own. Even with a growing defense budget, historic reliance on US suppliers and lagging domestic industry could prove to be significant obstacles.



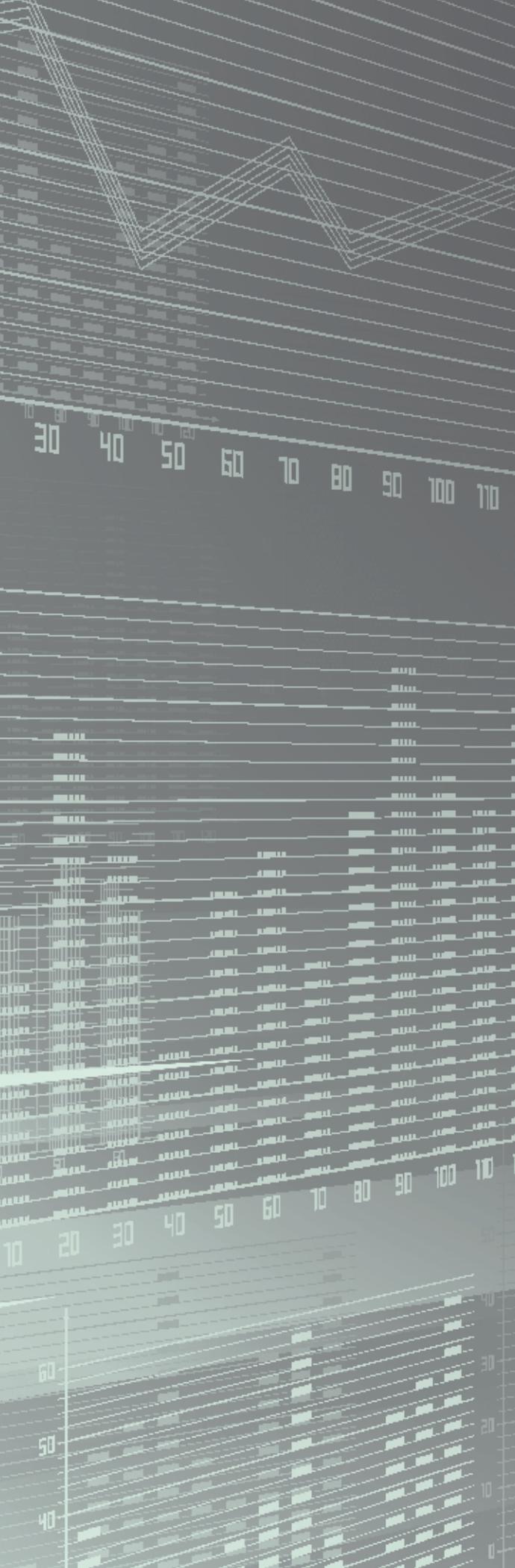
CONCLUSION

A shift in US posture would impose burdens on US allies in Europe and the Asia-Pacific, but those burdens would not be evenly felt. Adding nuance to this is the reality that self-sufficiency is not the sole option for these nations, and that US retrenchment is not binary. As the Trump administration begins to implement its policies, several indicators will bring their impact on allied nations into sharper focus.

Perhaps chief among these is the degree to which the US will employ other elements of its national power to support its allies even as it reduces funding for operations or pulls back forward deployed forces. For instance, the administration may choose to adopt a proactive and aggressive policy of equipping and training its allies through its existing security cooperation programs. Because this would achieve the effects of shifting the financial burden to allied nations, supporting the domestic US industrial base, and maintaining interoperability, it is not an altogether unlikely scenario.

Another factor will be the security and industrial partnerships that allies form among themselves. As Avascent reported in a previous white paper, US defense suppliers are increasingly facing challenges from the indigenous industrial bases of their end-user countries. These national champions have traditionally depended on demand generated by their governments, and could leverage increased domestic defense spending and the resulting lower production costs to aggressively pursue export opportunities.

These factors will not, however, alter the key trend that this paper describes. Defense budgets will have to grow as the US shifts its focus back to its shores. This fact will change the path that military modernization will take among US allies and reshape the competitive landscape of global aerospace and defense suppliers.



METHODOLOGY

Avascent Analytics analyzes the defense spending of 60 countries in its Global Platforms and Systems (GPS) database. The GPS database covers approximately 95 percent of international defense investment spending that is accessible to Western defense suppliers. The database features a comprehensive “topline” forecast of each country’s total defense spending over a 10-year period, as well as a detailed “bottom-up” analysis of its program-by-program plans. Additionally, the Platforms Module of the GPS database captures the current inventory of global defense platforms, including aircraft, ships and ground vehicles for the 58 countries covered. For each platform captured, the Platforms Module details the prime contractor, the first and last year of delivery, the size of the installed base per customer, and the number of units to be acquired over a 10-year forecast.

Avascent Analytics breaks down total defense spending figures for each country into five sub-accounts based on the nature of spending activity: procurement, research and development (R&D), personnel, operations and maintenance (O&M), and pensions. The bottom-up component of the database itemizes the procurement and R&D budgets among an array of individual program plans. These include ongoing programs, announced competitions and planned future acquisitions, as well as Avascent Analytics’ projections of future requirements over the next 10 years, to depict how each

country will spend its investment resources over time. Projections are based on multiple factors, including threat perception, mission area gaps, historical investment behavior, industrial base capacity, and other political considerations. Each program or platform acquisition is subsequently disaggregated into its component parts to provide sub-system granularity.

For the budget availability analysis present in this paper, GPS budget data was used to calculate four key performance indicators (KPIs). Avascent's topline forecast was used to source the size of the 2017 defense budget, to calculate the 2017-2022 defense budget CAGR, and to compute the percentage of total GDP spent on defense. It should be noted that the percentage of total GDP spent on defense figures may differ from commonly published figures due to Avascent Analytics inclusion or exclusion of specific government accounts on a country-by-country basis. The breakdown of total defense spending numbers into the five sub-accounts was used for calculating the percentage of total defense spending allocated to investment (procurement and R&D).

For the platform quality analysis in this paper, the age of airborne, maritime and ground platforms was calculated using the first and last year of delivery in the Platforms Module. The platforms were then divided into airborne, maritime and ground segments to calculate the average age of each segment. For further information on this database, please contact rtrapani@avascent.com.



AVASCENT
ANALYTICS



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About Avascent

Avascent is the leading strategy and management consulting firm serving clients operating in government-driven markets. Working with corporate leaders and financial investors, Avascent delivers sophisticated, fact-based solutions in the areas of strategic growth, value capture, and mergers and acquisition support. With deep sector expertise, analytically rigorous consulting methodologies, and a uniquely flexible service model, Avascent provides clients with the insights and advice they need to succeed in dynamic customer environments.

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