An Approach toward an Asia-Pacific Strategy
2012 to 2020

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On 17 November 2011, President Barack Obama announced before the Australian parliament that he had made a “deliberate and strategic decision—as a Pacific nation, the United States will play a larger and long-term role in shaping this region and its future, by upholding core principles and in close partnership with our allies and friends,” that the region is a "top priority" of US security policy, and that the United States is “here to stay.” In concert with the President’s statements and appreciating the importance of the region to US national security, General Norton A. Schwartz, US Air Force Chief of Staff, directed the Air Force Research Institute to undertake a yearlong study that would focus on the role that airpower will play in achieving national strategic objectives in the Pacific region from the present to the year 2020. He additionally directed that the study provide options and make actionable recommendations for how Air Force leaders should organize, train, equip, and present forces for combatant commanders to accomplish the full range of missions that may emerge through the end of the decade. Comprehending the complexity of the topic, the Air Force Research Institute assembled a select team of researchers charged with establishing a sound methodological approach and then conducting a comprehensive review of the subject.
Study Definition

Some people may argue that without a national strategy, it is impossible to develop a coherent approach toward the Asia-Pacific region. Other than times of war, it might be said that only once in US history has a grand strategy existed—that being from 1953 to 1991. Although the lack of a grand strategy may make it more difficult, the nation will not wait if the US Air Force simply chooses to stand by. Congress appropriates trillions of dollars for defense, and the American public expects a return on its investment. In this context, who better to advise the nation on the use of airpower than Airmen—and if not Airmen, then whom?

This regionally focused study is written at the strategic level to inform and guide US Air Force leadership over the next eight years. Further, the study is designed to provide an overarching strategy for the Service as the nation rebalances from Europe and Southwest Asia to the Asia-Pacific region. In accordance with the direction from the Chief of Staff, the study’s time frame lies outside the Future Year Defense Program and does not address programmatic issues. Although it takes into account the Air Force’s worldwide commitments, the study is not a global strategy. Neither is it solely about China. The research team recognized China’s significance but more broadly addresses the Asia-Pacific region from India to the Americas. Accordingly, the team focused on the major nation-states of Russia, China, and India, as well as the lesser states of Japan, the Koreas, Singapore, Vietnam, the Philippines, Indonesia, Australia, Myanmar (Burma), and Thailand. As appropriate to the study, the research team considered other nations and regions, including Canada, Latin America, Pakistan, and Southwest Asia. Finally, the study is not based upon a containment strategy but upon engagement across the region.
Methodological Approach

During the last half of President George W. Bush’s second term, Michèle Flournoy and Shawn Brimley published in Joint Force Quarterly an article on strategic planning and national security, asserting that the United States “lacks a comprehensive interagency process . . . [and that] various institutions in the national security apparatus have attempted strategic planning.” In proposing a structured approach to developing a comprehensive national strategy, they looked for inspiration to the Eisenhower-era Solarium Project, so termed as much of the ensuing discussion took place in the White House solarium. After the research team reviewed the strategic landscape, recognizing many of the similarities between the events of 1953 and those of 2012, it seemed appropriate to look to the Eisenhower-era process proposed by the authors to form the foundation for a study that would have the greatest likelihood of success for the nation and the US Air Force in the coming years. To better understand the process, it is helpful to have some background on the Solarium approach.

As President Dwight D. Eisenhower took office in 1953, he was confronted with stark realities consuming the national debate. The nation found itself in recession with unemployment reaching a decade’s high; a rising peer competitor had countered the military’s global commitments; and a tired nation was engaged halfway across the globe in combat as the American public had grown war weary without a clear and decisive conclusion to the conflict. Looking to develop a strategy that would carry the nation successfully through the Cold War, President Eisenhower formed three teams to explore potential approaches. He trusted military advisers to the point that he appointed Vice Admiral Richard L. Connolly to head one team and Air Force Major General James McCormack to head a second. He asked George F. Kennan,
former US ambassador to the Soviet Union, to lead the third team. The president then
requested that each put together a team of specialists from the State Department, the military
Services, and other national security agencies to review the broad implications of their
recommendations. The overriding assumption was that the United States and the Soviet Union
would not enter into nuclear exchange. This assumption did not preclude preparing for the
possibility but drove the three teams to develop alternatives to ensure that World War III did
not occur. In what would later be called Project Solarium, each team was assigned a specific
strategy to study and propose:

- Team A would argue that maintaining enough American military force would help its
  allies build up their forces and deter further Soviet expansion without initiating a
general war.
- Team B would argue in favor of drawing a line across Europe and telling the Soviet
  Union that any attempt to expand communist dominance beyond that line would
  constitute an act of war against the allies.
- Team C would propose a vigorous attempt to roll back the Soviet Union’s empire, by
  military force if necessary, and liberate all of its satellite nations.5

Following a detailed outbriefing by each team, President Eisenhower selected the
strategy proposed by Ambassador Kennan—that of containment. This strategy, with its many
modifications, successfully saw the United States through the Cold War, arguably deterring the
Soviet Union and simultaneously ensuring that nuclear Armageddon did not occur.

Having established the research methodology—a modified version of President
Eisenhower’s Solarium Project that employed a three-path approach (discussed in more detail
later in this chapter)—the team next defined the research question. The latter was designed to guide the discovery process and ensure that the study remained true to the Chief of Staff’s tasking. In its most basic form, the question is, What is the most effective use of airpower in the Asia-Pacific theater to the year 2020? In this context, airpower is defined as inclusive in the sense that it is not Service specific and that it encompasses air, space, and cyber as part of the construct.

In answering the research question, the team turned to the foundational elements of the study, defining the enduring US national interests, assumptions, and trends that would drive the future strategic environment. On the one hand, the team understood that US national interests and assumptions would define the study’s limits or form its boundaries. Trends, on the other hand, would inform the study since they could apply to a lesser or greater degree, based upon the situation, circumstance, time, and place relative to the future strategic environment. The team sourced enduring US national interests from those articulated in the May 2010 National Security Strategy, as driven through the National Military Strategy and informed by the January 2012 White House document Sustaining US Global Leadership: Priorities for US 21st Century Defense. In accordance with White House guidance, “each of these interests is inextricably linked to the others: no single interest can be pursued in isolation, but at the same time, positive action in one area will help advance all four.”

**National Interests**

- **Security**: The security of the United States, its citizens, and US allies and partners
• **Prosperity**: A strong, innovative, and growing US economy in an open international economic system that promotes opportunity and prosperity

• **Values**: Respect for universal values at home and around the world

• **International order**: Advanced by US leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges

The team derived the study’s assumptions from the 2011 and 2012 US National Intelligence Estimates. The following key assumptions bounded the study although the research team recognized that additional assumptions found in the National Intelligence Estimates remain valid.

**Assumptions**

• Engagement in Southeast Asia through bilateral and multilateral relations is critical to regional stability and prosperity.

• North Korea and the Taiwan-China relationship will remain strategic concerns.

• The United States will remain a global power and have global responsibilities.

• The growth of antiaccess/aerial-denial (A2AD) capabilities will challenge US force projection and forward military presence.

• The Department of Defense’s (DOD) budgets will face political scrutiny and will come under pressure.

• Weapons of mass destruction and the proliferation of missile technology will remain an important concern.

• The nations of the Asia-Pacific region will remain vital US trading partners.
• Continued competition for natural resources in the South China Sea will lead to tensions.

• Natural disasters will take place, causing humanitarian crises.

• Open lines of communications will be necessary for economic growth.

• Globalization—growing interconnectedness as the result of expanded flows of information, technology, capital goods, services, and people throughout the world—will largely be irreversible and likely become less Westernized.

• Great-power conflict escalating into total war will be unlikely.

• Identity politics—centered on ideology, nationality, and religion—will pressure governance.

The research team determined trends in the Asia-Pacific region from the literature and prevailing thought. All trends—which were derived from the source materials referenced in this study—fall into 11 categories, from economic trends and population to governance and military spending (see attachment 1). The trends guided and informed the research but did not restrict the study. For example, military spending or urbanization might have a different connotation in relation to China and India than to Myanmar and Vietnam.

Recognizing that the study must withstand considerable scrutiny and remain creditable, the research team used a traditional approach in addressing the research question. First, extensive primary-source research provided a rich foundation for an understanding of the geographic landscape and the complexities of the issues.¹⁰ Second, once informed by the literature, the team conducted select interviews among US and foreign government officials, senior US and international military officers, and leading academics in the Asia-Pacific field of
Third, in support of the study, on 6 and 7 December 2011, the Air University and the Air Force Research Institute hosted an Air Force Symposium Series conference designated the Asia-Pacific Century: The Emerging Challenges. Recognized experts from academe and the military gathered to discuss issues, present papers, and propose possible solutions to the region’s strategic challenges. Additionally, almost 200 individuals representing all of the Air Force’s major commands and six of the seven continents—excluding Antarctica—attempted to answer a series of questions designed to feed the study’s research efforts. The research team presented the methodology and foundational pillars—national interests, assumptions, and trends—to the panel of experts for their review, comments, and modification. The panel members refined the methodology and validated the study’s foundational pillars.

**Strategic Environment in 2012**

Similarities do exist between the environments in 1953 and 2012, but significant differences are evident as well. China is the rising near-peer competitor, not the Soviet Union. Rather than competing ideologies of democracy versus communism, this era reflects regional and global influence as expressed through economic and military power. The world is not divided into two armed camps with competing militaries stationed upon definable boarders, as was the case with the North Atlantic Treaty Organization (NATO) and the Warsaw Pact. In the world of 2012, the major competitors desire to play within a capitalist construct, within the existing world economic order. It is important to note that Europe and the United States wrote the rules within which China, Russia, and India, as well as the lesser states, desire to excel. This is more about a rise of economic power, enabled and reinforced by military power. There is no guarantee that the outcome will be peaceful, but unlike the situation in 1953, we have more
time to influence the landscape. To further set the context for understanding the study, one should have an appreciation for the players or the nations that influenced the team’s thinking. First, the nations—other than the United States—that dominate the Asia-Pacific region are Russia, India, and China.

Although not the Soviet Union, Russia remains a powerful nation—and not simply because of its nuclear arsenal. It may have limited capability to project power, but Russia retains some of the influence of the old Soviet Union, particularly in Southwest Asia. Because of the country’s oil revenue, its military is once again modernizing. Further, Russian officials have made numerous public statements concerning their aspirations about dominating the high north—the region around and under the Arctic Circle. The fabled Northwest Passage is opening, ultimately to year-round navigation, making Russia—and Canada—key players in worldwide commerce. The new trade route creates a dynamic whereby inexpensive Asian products flood European markets, increasing the flow of wealth toward Asia and further destabilizing the euro and the European Union. Within the study’s time frame, though, Russia might best be described as “a trouble maker” in relation to US national interests. It does not have the power to challenge the United States but does retain enough influence and military might to slow or frustrate US actions. For an example, one need only turn to Russian involvement in Syria.

India, the world’s second most populous nation and most populous democracy, has great potential constrained by significant challenges. Bordered by two nuclear powers—China and Pakistan—India struggles to project a relevant global and regional presence. Because India remains transfixed on a rising China and must keep an eye on Pakistan, its nationalism drives that country to make endeavors into space, possess nuclear weapons, and deploy its first
nuclear-powered submarine. Given its designs on status as a world power, no consideration of the Asia-Pacific region can ignore India. Its economy is growing at a rate of between 5 and 7 percent per year, often favorably compared by many individuals to the Chinese economic growth rate. However, despite great potential, India will not be able to constrain or counter a rising China. It will enjoy the most success when projecting power into the Indian Ocean but not far beyond. India’s ardent desire to remain unaligned; its nineteenth-century, British-based bureaucratic system; and its crippling level of poverty and illiteracy make any alliance with New Delhi problematic.

The research team entered the study recognizing that the report could not confine itself to China. However, to ignore China would be foolhardy. That country’s economy and military are clearly in ascendance. An average annual economic growth rate of more than 10 percent enabled China to obtain power and influence in an export market that it could have only dreamed about during the days of the Cultural Revolution. An economic system based principally on a capitalist model stretches across the globe, exploring new export markets and investing in new sources of raw material. Some economists predict that the Chinese gross domestic product (GDP) will surpass that of the United States by as early as 2018. From African oil to Australian iron ore to Latin American copper, Chinese firms seem to dominate where US firms once thrived. China’s show of force in the South China Sea during the first decades of the twentieth century is not about restricting trade routes but about securing resources to feed both its growing population and its industrial machine. A growing Chinese navy and air force, coupled with a formidable A2AD capability, present a complex challenge for
the US military and US presence in the region. However, to understand the complexity of the region, this study attempts to place China in perspective.

China is not the Soviet Union 2.0. Unlike the Soviet Union, it has no strategic alliances, save that with North Korea, and has limited capability to defend its global quest for natural resources. China relies upon the United States to ensure that lines of communications remain open for transit, both on the sea and in the air. In contrast the United States has 50 strategic alliances and is capable of power projection across the globe. China might be characterized as its own worst enemy since its actions offer increased opportunities for the United States. Heavy-handed Chinese maneuvers within the region drive requests from Australia and the Philippines for closer US military ties; at the same time, Vietnam, Singapore, and Indonesia seek closer diplomatic relations to counter threatening Chinese actions. Even once-cool relations with India and Myanmar have significantly warmed in the wake of China’s stern attempts to influence its neighbors.

Military conflict with China is not inevitable. It is not the enemy of the United States that the Soviet Union proclaimed to be. The challenge is not to see every action in a military context. For example, many people’s concern over Chinese action in the Taiwan Strait assumes that the current strategy of peaceful integration is flawed and that the Chinese central government will change tactics. Military conflict between China and Taiwan does not benefit either side. The two have exceptionally close economic and cultural ties. The most logical outcome is one in which the two former adversaries unify, with Taiwan becoming a semiautonomous district, much as Hong Kong did some 15 years earlier. Further, Chinese military action against Taiwan would certainly garner worldwide condemnation and could risk direct confrontation with the
United States—something China desires to avoid. Internal conditions in either nation could precipitate military action, but if that were to occur, the United States would find itself at a disadvantage, operating from external lines in a conflict that could result in nuclear exchange to ensure a successful US outcome. Additionally, from a US Air Force perspective, even though Chinese A2AD assets are formidable, they present a threat mostly if conventional intrusion into Chinese airspace proves necessary. A complicating factor is that with the least miscalculation on either side, conventional action could turn nuclear very quickly. This is not to discount current Air Force operational initiatives concerning Chinese A2AD. It is critical that the United States assure allies and others in the region that it takes the rise of Chinese nuclear and conventional military power seriously. If US policy were articulated as it was through NATO during the Cold War (the potential first use of nuclear weapons to halt conventional forces), it could unnecessarily heighten tensions in a region where nuclear weapons have been used before.

Chinese-US relations are proving considerably more complex than US-Soviet relations during the Cold War. With the Soviet Union, battle lines were drawn and sides chosen in a war of competing ideologies. In stark contrast, Chinese power derives from its economic success that is occurring within a global, free-market, capitalist economy. The rise of China is not an all-bad-news story. The growth of the Chinese economy has raised millions of people in the Asia-Pacific region out of poverty. Close US allies like Japan, Australia, and South Korea depend upon the Chinese economy to fuel their growth. The health of the US economy is improved by a stable China and will continue to benefit from the new markets that open due to increased affluence in the region. For example, the American automobile industry looks to China to counter the reduction of demand elsewhere—witness the fact that General Motors sells more
Buicks in China than it does in the United States.\textsuperscript{18} Certainly, China wants to dictate the rules to dominate within this construct, but it does not desire to destroy the system and replace it with a different ideology, as the Soviet Union articulated during the Cold War.

It follows then, that a goal for the United States—enabled by the US Air Force—must be to encourage a peaceful rise of China into the global economic system. However, such a rise is not inevitable. Some individuals like John Mearsheimer at the University of Chicago have stated that “China cannot rise peacefully.”\textsuperscript{19} He postulates that one can expect China to try to push the United States out of the Asia-Pacific region, much as the United States did with European powers during the nineteenth century. A realistic approach ahead says that Chinese-US relations most likely will be characterized by periods of cooperation and competition. The Chinese government will cooperate when doing so is to its advantage and will compete when the situation so dictates. The competition will at times be friendly but may also be fierce with a military subtext. Chinese history dictates that the United States—specifically the US Air Force—should never enter the competition from a position of weakness.

As complex as Russia, India, and China make the region, the lesser nations add additional complexity. Japan, having one of the strongest economies in the region, will increasingly find itself battered between China—its close neighbor and major trade partner—and the United States, its close strategic ally since World War II. Lacking the natural resources that drive the rise of Russia, India, and China, Japan will continue to struggle to reshape its image in the region, one scarred during the first half of the twentieth century. Singapore is the economic crossroads in the region. Indonesia, the Philippines, Vietnam, and Myanmar are warming to the United States to varying degrees. Australia, a traditional ally, welcomes an
increased US presence but looks to the future with some trepidation. It faces a large neighbor to the north that it fought in the late 1950s, increased Chinese rhetoric pointed at weakening US ties, and a concern over immigration that could alter the face of the nation during this century. Throughout Australia’s history, its major trading partner and strategic ally were one in the same—first Great Britain and then the United States. In 2012 Australia was forced to deal with the new dynamic of dual alliance—one in which China is its major trading partner and the United States is its strategic military partner. North Korea continues to act like a spoiled two-year-old, wanting attention at the least appropriate time, but this two-year-old has nuclear weapons. South Korea desires to continue its close ties to the United States and to develop its economy but must remain vigilant toward its neighbor to the north, which it fought in the 1950s. Certainly, the South does not want to be drawn into a conflict with China. This has implications for positioning US forces as the United States attempts to deal with a rising China. As diverse as the region appears and as complex as relations may seem, one characteristic unites each of the lesser nations: a desire to ensure regional stability with a continuation of economic growth that virtually everyone has enjoyed over the past decade.

**Three Alternative Paths**

Just as Eisenhower’s Solarium Project used three solution sets to establish policy toward the Soviet Union, so does this study employ three alternative paths as it looks to the Asia-Pacific region. Starting with established US national interests, the paths identify what would serve the best interests of the United States, what would serve its worst interests, and what will most likely occur. This study does not seek to establish a detailed prediction of the future; rather, it projects reality forward from 2012 and attempts to determine recommendations that
give the Air Force the greatest opportunity for success in the next decade. The three paths create a possible range of future events, realizing what will occur most likely exists between the extremes. Consequently, the three cases—best case, worst case, and most likely case—establish the construct for establishing actionable recommendations. In defining the boundaries, the research team looked at what might be the best, worst, and most likely cases at some distant, undefined future date. In this context, the best case would be a peaceful region operating under international laws and norms without the potential for violent conflict—a path that one could term *Pax Pacifica*. One could characterize the worst case as a region fraught with military conflict trending toward nuclear exchange—or Cold War II. The most likely case, again with an undefined future date, would be the emergence of regional powers that counter US influence and interests in the region.

Restricting these timelines to the year 2020, the limit of this study, causes a different picture for each path to emerge. The best case describes a region where nations are guided by international agreements and the rule of law. Conflict exists but falls short of direct military engagement. China, India, and Russia continue a peaceful rise, integrating more fully into the global economic order. The worst case describes a region rife with economic and military conflict, where free and open access to critical lines of communications is jeopardized and where protective tariffs restrict trade. Direct military engagement between the United States and one of the three rising powers is unlikely but could occur due to miscalculations. Military action remains possible between one of the three principal actors and one or more of the lesser nations, which could inadvertently draw the United States into direct military engagement with one of the rising powers. The most likely case for the region involves intense competition for
natural resources and use of a “show of force” as a tool to obtain political gains—but falls short of hostile, aggressive actions leading to state-on-state warfare. International norms provide regional guidance, and the acquisition of arms continues as an “arms stroll” rather than the “arms race,” as occurred during the Cold War. Each case requires that the US Air Force be prepared to meet US national needs. The differences in each case, though, dictate how and through what means the specific capabilities are required.

By articulating three viable, alternative paths, the study recognizes that no single answer is possible. The future, even more than seven years hence, has not been written. Unforeseen events could dramatically affect any projection or path. Nor is it viable to prepare only for the worst case. Making recommendations assuming hostilities could be a self-fulfilling prophecy, while at the same time being fiscally irresponsible. This is not to say that the Air Force should not be prepared if hostilities erupt but that alternatives do exist. Two critical elements present in 2012 did not exist during the Eisenhower administration: time and a desire to operate within a capitalist economic construct. Time allows the United States to avoid unwittingly moving down a path that leads to a new Cold War, ultimately placing national sovereignty at risk. Playing within the capitalist global economic order means a wish for stable markets—something discouraged by military conflict. A critical element of each path becomes how to move worst case closer to most likely and most likely closer to best case.

The following three chapters address each path independently, analyzing each one from a diplomatic, informational, military, and economic (DIME) perspective. A synthesis chapter offers analysis of the commonalities of all three and details recommendations that address the preferred mix of US Air Force capabilities needed to assure the most success in the near terms
and midterms to the year 2020. Since major changes are unlikely within the next eight years, the synthesis chapter begins with recommendations from the most likely path and moves toward best case and worst case. The study defines capabilities as derived from the Air Force’s foundational ideas of Global Reach, Global Power, and Global Vigilance, and as operationalized by its enduring contributions to national security and the service’s core functions. Recommendations will address the preferred mix that exploits the speed, range, persistence, and payload of service capability to attain the desired strategic outcome.20

Concluding the study are annexes designed to provide additional context and background for the reader. They address such areas as the Air Force’s foundational concepts for strategy development, emerging trade routes, the effect of the Japanese tsunami in 2011, and additional ongoing Asia-Pacific studies.

The following chapters attempt to articulate a strategy of engagement rather than the Cold War policy of containment. The end state of an engagement strategy would entail a peaceful rise of China, India, and Russia successfully integrated into the global economic order. It is not simply repetitive to emphasize that what exists in 2012 did not in 1953—time to shape the future. Coming out of World War II, the ideological battle lines were already drawn. The postwar world truly faced the possibility of nuclear exchange. Today we may see lines forming, but we have time to shape them. The challenge lies in ensuring that actions do not blindly lead us down a path to Armageddon. Intentions on all sides must be very clear. A strategy designed to reassure allies that the United States is not leaving the region remains central to our existence as a global power, but some could see it as an attempt to contain one or more of the rising powers—a perspective reflecting the complex environment in which the United States
and the US Air Force must operate. Actions that one person sees as leading to constructive collaboration, another views as a prelude to military action. The following chapters attempt to display a continuum of future possibilities, each path firmly planted in today’s realities to help the US Air Force navigate the uncertain future.

Notes


4. Ibid., 81.


6. See attachment 1 for trends.


9. Ibid., 17.

10. See bibliography.

11. All interviews were conducted under a policy of nonattribution.

12. See appendix High North and Northwest Passage analysis.


15. Barth, “Why India Won’t Be the Next China.”


20. See the synthesis chapter of this report for a detailed description of the foundational ideas of Global Reach, Global Power, and Global Vigilance; the Air Force’s enduring contributions of domain control, responsive and full-spectrum intelligence, surveillance, and reconnaissance, and rapid global transport and influence; and the 12 service core functions.
Attachment 1

Trends

Economic Trends

“The Asia and Pacific region accounts for almost one third of global GDP measured in purchasing power parity (PPP) terms. Many economies in the region have made substantial increases in their per capita GDP measured in PPP since the beginning of this century. GDP growth rates in constant prices in 2009 were down in most economies of the region, but despite the current global crisis, quite healthy growth was recorded by some of the larger economies. Export markets weakened in 2009 and the shares of exports in GDP were lower in almost all economies compared with their pre-crisis levels.”

Transport, Electricity, and Communications

“The People’s Republic of China and Japan have more than half of all the motor vehicles in use in the Asia and Pacific region. Road networks are expanding in almost all economies and unpaved roads are being upgraded to hard surface. Industrialization and household electrification have led to massive increases in electricity production throughout the region, mostly still generated by coal and other carbon fuels. There are less than 20 personal computers per 100 persons in most economies of the region—well short of the 50-plus typical of developed economies.”

Population

“The Asia and Pacific region accounts for about 56% of the world’s population, with about 37% living in the two most populous economies, People’s Republic of China (PRC) and
India. Population growth rates in the developing economies of the region had fallen to less than 1.1% by 2009 compared with 1.7% two decades earlier. Urbanization is increasing throughout the region. In most economies women, who already have longer life expectancies than men, have also achieved the largest increases in life expectancy since 1990.”

Money, Finance, and Prices

“Inflation rates fell sharply throughout the region in 2009 although food prices rose faster than other consumer items. Since 2000 many Asian currencies have strengthened against the US dollar, but in 2009 dollar exchange rates of almost all Asian economies fell sharply. Growth of the money supply accelerated in most economies as governments implemented stimulus packages. Asian stock markets, with the exception of India, continued to decline in 2009, though more slowly than in 2008.”

Consumer Consumption in the People’s Republic of China

“Household consumption has grown rapidly in China over the past two decades, averaging around 8 per cent a year and rising to around 10 per cent in the past few years. This is well above the pace recorded in most other countries, with China’s real annual household consumption growth on average 3 percentage points higher than other emerging economies in Asia and 6 percentage points higher than in the G7 advanced countries. Despite this strong growth, the share of household consumption in China’s total expenditure has declined. For many years this trend was fairly gradual, with the household consumption ratio falling from 52 per cent of GDP in the early 1980s to 46 per cent of GDP by the end of the 1990s. However, the pace of the decline picked up noticeably in the 2000s, with the household consumption ratio
falling a further 11 percentage points, to be 35 per cent of GDP in 2008. In contrast, consumption ratios in other emerging Asian economies have typically remained around 55–60 per cent of GDP over recent decades.″

“The Chinese used to see individualism as a word with bad connotations, applicable to people who only cared about themselves but not others. However, the Chinese of today have come to see individualism as something to be pursued and developed.”

Globalization

“The largest part of Asia’s external trade is within the region, while trade with Europe and North and Central America accounts for smaller shares of both imports and exports. The global economic crisis caused a sharp fall in merchandise exports from Asia and Pacific economies in 2009. International tourism has suffered from the crisis; tourist arrivals and receipts in popular destinations mostly fell in 2009. Migrant workers’ remittances were expected to fall victim to the global crisis but they held up relatively well except in Central and West Asia. Net FDI [foreign direct investment] inflows as a percentage of GDP are sharply down compared with pre-crisis years.”

Energy and Environment

“The Asia and Pacific region produces just under 32% of the world’s energy, with the People’s Republic of China (PRC) producing almost half of the total energy in the region. Most Asian economies rely on imports to meet their energy needs. Measured by GDP per unit of energy use, most Asian economies are becoming more energy efficient.” The PRC’s oil consumption will continue to grow, as will its oil production. However, the PRC’s domestic oil
production will not be sufficient to keep up with demand. Between 2009 and 2011, the PRC’s thirst for oil increased by 9.6 million barrels of oil per day while internal oil production has been forecast to reach 4.5 million gallons per day.9

**Government and Governance**

“The global crisis has increased fiscal deficits in most economies and reduced tax revenues, but government expenditures on education and on social security and welfare have been sustained in most cases. As a measure of the ‘ease of doing business,’ days taken to register a new business have been falling in most economies but still range from 1 to 100 days. The Asia and Pacific region is perceived as having some of the least corrupt and some of the most corrupt economies in the world; unfortunately, perceived corruption is getting worse in most economies.”10

**Asian-Pacific Opinions of the United States of America**

Although the United States of America has vast reserves of “soft power,” many nations in the Asia-Pacific region have unfavorable and skeptical views of the United States and its intentions. In particular, the populations of many states believe that America promotes international law to inhibit the actions of other nations but hypocritically does not follow these rules.11 At the same time, many key nations have a favorable view of the PRC.12

**Urbanization**

In the 10 years between 2005 and 2015, the urban populations in the Asia-Pacific region will grow by approximately 352 million people.13 This large population movement is creating key environmental challenges such as deteriorating air and water quality, persistent noise
pollution, and the management of municipal, industrial, and hazardous waste. Furthermore, the trends indicate that a vast proportion of people in urban centers lack access to clean water and proper sanitation while living in slums.\textsuperscript{14}

**Military Spending**

The United States continues to spend more on defense than any other nation, but countries in the Asia-Pacific have increased their military budgets. In particular, the PRC, India, and Brazil “also made large increases, reflecting their continued economic growth and aspirations for global and regional influence.”\textsuperscript{15} The PRC’s spending efforts are largely directed at two key initiatives: improving pay and training as well as modernizing and “informationizing” the armed forces.\textsuperscript{16}

**China**

Although China’s military leadership appears to be developing a range of options for all levels of warfare, the People’s Liberation Army (PLA) is most disposed toward a denial strategy that emphasizes operational paralysis as a means of defense or duress to compel an adversary to heed Beijing’s will. In support of this strategy, the PLA is rapidly advancing its capacity to apply air, space, and cyber power in order to defend against threats to national sovereignty and territorial integrity. Constrained by a relatively underdeveloped aviation establishment, the PLA is investing in air and space capabilities that may offset shortcomings in the face of a more technologically advanced adversary. Most significant is the expansion of, and growing reliance on, conventional ballistic and ground-launched cruise missiles as the centerpiece of the PRC’s political and military strategy.\textsuperscript{17}
North Korea

North Korea’s continued development of ballistic missiles that can deliver nuclear warheads has changed the threat dynamic in the region.

Poverty

Although some countries have made significant progress in reducing the numbers of individuals who live in poverty, approximately one-quarter of Asian and Pacific people remain impoverished. Since 1990 the poverty rate has fallen dramatically, from 1.6 billion to 0.8 billion.18

Education

According to the United Nations, “Asia and the Pacific is home to the largest number of illiterate adults worldwide and educational improvements have hardly been able to keep up with population growth across the region—only marginal progress in literacy has occurred in the last decade, with 518 million illiterate adults in 2008 down from the 527 million of 10 years ago.”19 Furthermore, attempts to keep children enrolled in secondary education have met with little success. Only six of 10 secondary-school-aged children were enrolled in secondary education.20 Perhaps more notable is the expected duration of education in measuring a nation’s appreciation and acceptance of its value. The expected duration of education is the number of years a child of school-entrance age is expected to spend in school through university. At the top, Australia and New Zealand expect their children to receive 20.4 and 18.5 years, respectively. On the other hand, the PRC had expectations of 11.2; India, 10.4 (2007); and Indonesia, 12.7.21
Natural Sciences and Engineering Doctoral Degrees

Approximately 17,500 US citizens earned doctorates in the natural sciences and engineering in 1993. This figure had risen to about 22,000 by 2006. By comparison, the citizens of the PRC earned about 2,000 doctorates in 1993, rising considerably to about 21,000 in 2006. The PRC now produces as many terminally degreed scientists and engineers as the United States. Meanwhile, the number of individuals earning the same degrees in the other major countries in the Asia-Pacific region—India, Japan, and South Korea—rose only modestly.22

China’s Outward Foreign Direct Investment

The PRC’s position as an originator of outward foreign direct investment has risen dramatically in recent years to the fifth largest. Despite the impressive growth trends, however, Chinese outward direct investment (ODI) remains relatively small: China, including Hong Kong and Macau, accounts for just 6 percent of global ODI stock today.23

Social Attitudes in India

According to a public opinion poll in 2006, “In terms of the social aspects of life, Indians do express a level of concern. Six in ten (58%) believe India’s security is ‘more in danger from other Indians than from foreigners,’ and majorities (55%) believe that the ‘caste system is a barrier to social harmony.’ These views are common among age, income and religious groups.” Furthermore, while 65 percent believe that India should be “a country whose economic success is seen as vital to that of the rest of the world,” 47 percent acknowledge that “corruption is just a fact of life which we should accept.”24
Food, Diet, and Agriculture in the People’s Republic of China

Food and Agriculture in China

“For a country with nearly 1.3 billion consumers and limited natural resources, China’s level of food imports is surprisingly low. China is nearly self-sufficient in food and is a major net exporter of many food products, including manufactured food and beverages, animal products, vegetables, fish and seafood, tea, and fruits. China’s agricultural exports go primarily to neighboring Asian countries, including Japan and South Korea, which are also among the top markets for U.S. agricultural products. Overall, China is a net importer of bulk commodities, primarily wheat. In some years, China has been a major importer of corn and cotton, and in other years, it has been a major exporter of those commodities.” However, “in 2003 and 2004, imports exploded, more than doubling to $25 billion in 2004 and 2005. China is now the fourth-largest agricultural importer in the world (after the EU [European Union], United States, and Japan) and the fourth-largest market for U.S. agricultural exports (after Canada, Mexico, and Japan). U.S. agricultural exports to China reached $5.5 billion in calendar year 2004.”

Rising Incomes and Food Demand

“As China has over one-fifth of the world’s consumers and an economy growing at 7–8 percent annually, the country’s rising consumption of food has the potential to significantly impact world food demand. In past decades, policymakers in China were concerned primarily with supplying enough grain to meet basic nutritional needs of China’s huge population. Now, however, the emphasis is shifting from quantity of food demanded to the changing composition of food demand. Strong income growth and rapid urbanization are diversifying the Chinese diet and creating demands for high-value and specialty food products.”
New Entrepreneurial Hot Spots

“For example, whenever women become an important part of the workforce, or additional political or economic freedoms are introduced, entrepreneurial activity grows up quickly. That's why we now see counterintuitive trends: a booming art market in China. The fact that Vietnam is a leading hotbed of entrepreneurism.” The rise in entrepreneurial activity is reshaping the corporate landscape, and Asian firms are displacing long-dominant US firms in the Fortune 500. This, in turn, is attracting more American talent overseas.

Cyber Conflict

The use of computers and the Internet in conducting warfare in cyberspace has the potential to disrupt key services, utilities, government operations, and communication channels. Cyber warfare can also expose classified intellectual property, resulting in the loss of advanced commercial and military technology to foreign competitors. As early as 1996, a Chinese general noted that vulnerable computer networks could be exploited as a new form of warfare, stating that the cyber domain might “make the enemy’s command centers not work by changing their data system . . . [to] cause the enemy’s headquarters to make incorrect judgment by sending disinformation . . . [and to] dominate the enemy’s banking system and even its entire social order.”

Notes

2. Ibid., 234.
3. Ibid., 125.
4. Ibid., 181.


6. This study is conducted by a leading media agency that performed a trend analysis of Chinese consumers. The previous study downplayed individualism, but in the 2012 forecast analysis, Chinese individualism was the number-one trend. Jin Wu and Theresa Loo, “Consumption Trends, China 2012,” PowerPoint presentation, slide 6, MEC China, accessed 18 January 2012, http://www.slideshare.net/mandywjl/consumption-trends-china-2012.

7. Ibid.

8. Ibid.


10. Asia Development Bank, Key Indicators, 255.


12. We reached this conclusion via the sources cited in endnote 9.


14. Ibid., 23. For trends on these issues, see not only the most recent state-of-the-environment report but also the previous one, published in 2000.


19. Ibid., 49.

20. Ibid., 43.


“Shift Happens.”¹ In 1900 Britain was the richest country in the world. Boasting the planet’s largest military, Britain was the center of global business, information, finance, and commerce. The country enjoyed an educational system second to none, and its currency was the world’s benchmark. In fact, a standard dictionary definition of *sterling* as having fine quality derives from the intrinsic trust that the world placed in the British pound as recently as 80 years ago.² In the early part of the twentieth century, the British Empire, known as “the Empire on which the sun never sets,” covered one-fifth of the earth’s land area and included a quarter of the world’s people.³ Yet, in only a few decades, this empire crumbled, and the era in which Britain ruled the seas gave way to what historians would call “the American Century.”⁴

A shift occurred as America emerged from the two world wars with the world’s largest economy, gold reserves of more than 20,000 metric tons, and the world’s most advanced commercial infrastructure. The US economy grew nearly 50 percent during the 1940s, and for a brief time America was the world’s only nuclear superpower.⁵ For the remainder of the twentieth century, the United States was the preeminent nation-state—and, as of this writing, remains so.

Yet, a new shift is under way, first noticed in the 1960s. Even then, Asian demographics portended a major shift in economic might that would create a new geopolitical landscape on the planet.⁶ In the last 15 years, many other forward-looking studies have come to the same conclusion. Among the possible outcomes that might take place before 2030, the *Air Force*
2025 study pointed to the rise of an Asian colossus that would become “the largest economic power the world has ever known.” More recently, economists at the International Monetary Fund projected that the crossing point between China’s economy and that of the United States will occur in 2016. According to their prediction, by the end of this decade, the United States will have fallen to the world’s third largest economy—behind the European Union and China.

The fundamental question is not whether such a shift will occur but how, given the fact that the “American Century” is giving way to the “Asian Millennium.” This chapter seeks to paint the “best case” alternative future for this transition between now and 2020. It is a path that will lead eventually to peaceful cooperation among global powers and the states of the Asia-Pacific region, but fully attaining such a high level of cooperation remains unlikely within this decade. Thus, this picture depicts an incomplete journey. It is a path toward an outcome China has called a “harmonious society” and a “harmonious world” but a route only partially traveled. Because we are not likely to arrive at the destination—the next global equilibrium—until well into the 2030s or beyond, this essay depicts a waypoint along that path and the challenges for the United States as it navigates toward a future where Asia has the predominant role.

This best-case path is based on two pillars. The first is the idea that China will continue to move in the direction of increased cooperation. The second holds that the United States continues to shift toward a more Asian-centric view of its interests. This scenario explores the environment in Asia to discern what must occur to create this set of conditions. The reader should note that other sets of assumptions yield different scenarios and that this volume
explores two somewhat “darker” potential outcomes. This chapter, however, addresses a peaceful rise of Asia—one that begins with the concept of harmony.

**Harmonious Society and Harmonious World**

For the past 30 years, China has followed a strategic course of cumulative addition to past success. This path began under Deng Xiaoping, who argued that “to be rich is glorious” and then put China on a strategic course often called the “24-Character Strategy”.¹¹

“冷静观察，站稳脚跟，沉着应付，韬光养晦，善于守拙，绝不当头.”

This strategy translates to “Observe calmly; secure our position; cope with affairs calmly; hide our capabilities and bide our time; be good at maintaining a low profile; and never claim leadership.”¹²

The loosening of restrictions to corporate growth combined with China’s new external philosophy to create the onset of more than 30 years of spectacular economic development. China’s gross domestic product (GDP) in 1970 was a mere $130 per person, totaling only a little more than $130 billion.¹³ Today, although estimates vary, China is widely recognized as the second largest economy in the world, its GDP now believed to exceed $12 trillion with a growth rate of about 7.5–8 percent per year.¹⁴

Other East Asian nations saw their economies rise in lockstep with that of the Asian colossus. From 1960 to 1995, Japan, Hong Kong, South Korea, Singapore, Taiwan, Indonesia, Malaysia, and Thailand all maintained a growth rate at least double that of the rest of East Asia.¹⁵ By 2000 Asia boasted a greater GDP than that of North America, and by 2005 the GDP of East Asia alone amounted to $12.8 trillion—outstripping North America’s $12.7 trillion.¹⁶
Collectively, the Asian continent’s current GDP is not quite double that of North America and is more than 50 percent larger than the combined economies of the nations of Europe.

Asia came to this outcome through cooperation, a concept not lost on the generations of Chinese leaders who followed Deng Xiaoping. For the past 10 years, Hu Jintao has articulated a dual philosophy of harmonious society for affairs inside China and of harmonious world to describe China’s desired objective with regard to external relations. In concert with this philosophy, the XXIX Olympiad in Beijing adopted the theme “One World, One Dream.”

Discord amongst the Harmony

In spite of China’s desires for cooperative and constructive relations with its neighbors and the world, there are a few stumbling blocks that may get in the way. Uncertainty regarding economic growth, ongoing border disputes, and issues concerning rights to the South China Sea all represent potential challenges toward constructive and harmonious relations among Asian states. Although this scenario examines the entire Asia-Pacific region, most of these stumbling blocks share a common element—China. Further, successfully achieving a stable path toward cooperation requires overcoming each of these stumbling blocks.

The Economy

China’s internal governing philosophy has as its primary goal the survival of the Chinese Communist Party (CCP). In fact, the principal loyalty of the People’s Liberation Army is not to the state but to the party. This notion that all stability depends upon the party’s continued grasp on national power contains within it the idea of stability of the populace. This, in turn, requires sustained economic growth to provide the central government the resources to build a
better life for its people, enhancing the CCP’s legitimacy. Linking these ideas more plainly, the principal political goal of the CCP’s survival is a function of continued significant economic development, which is not certain.

Disparate predictions exist for China’s economy over the next 10 years. In Barron’s cover article, “Falling Star,” Jon Laing argues that the Chinese economy will fall soon and land hard. In marked contrast, Robert Fogel’s piece in Foreign Policy maintains that China’s economy is headed for a GDP of $123 trillion before 2040 and that nothing will stop it from becoming several times the size of the US economy.

China’s growth rate is important because anything less than about 7 percent risks political instability. Slower advancement would result in less wealth distribution by the CCP to its poor areas, exacerbating the disparity between China’s rich and poor. Should this inequality rise to critical levels, unrest and internal instability could ensue, and the People’s Liberation Army—the guardian of the party—would find itself playing a major role in maintaining China’s stability. This situation could have ramifications both internal and external to China, depending upon the cause of the slow growth.

Thus, China’s economy is a key element in regional stability. Major slowdowns in economic expansion could precipitate a crisis for China. Remaining on a best-case path toward the future, therefore, depends upon an environment in Asia conducive to mutual prosperity—one in which the Chinese economy can continue to lift its population out of poverty.
Land Border Disputes

As the major rising state in Asia, China has not always enjoyed peaceful relations with its neighbors. Since World War II, China has engaged in active disputes over its land borders with Russia, Bhutan, India, and Vietnam, some of which remain active.

In 1969 Russia and China exchanged fire over three islands at the confluence of the Aigun, Amur, and Ussuri rivers. The Treaty of Aigun in 1858 should have resolved a long-standing dispute, but the Chinese unilaterally determined in the 1960s that the previously agreed-to borders were unfair. Fighting broke out in the region in 1969, and even though the battle did not spread to the heart of either country, the final borders remained unresolved until 1997, when Russia and China settled a border disagreement that had lasted more than three centuries.23

China’s relations with Bhutan have been cold, both countries contesting the jurisdiction of numerous enclaves in Tibet as well as the mountain of Kula Kangri.24 Consequently, no formal diplomatic relations exist between Bhutan and China, and interaction between the two countries remains terse, Bhutan not having responded to recent offers by Beijing to reopen negotiations.25

Regarding territory along the Himalayas, China has engaged in several border disputes with India involving the regions of Arunachal Pradesh, Askai Chin, and Jaamu and Kashmir. The state of Arunachal Pradesh was ceded to India in the Simla Accords of 1913–14 negotiated by representatives of China, Tibet, and Britain while India was still a British colony.26 Before conclusion of the accords, the Chinese withdrew on principle because they objected to Tibet’s having a voice in drawing the treaty border lines.
Britain, India, and Tibet finalized the treaty, which established a boundary known as the McMahon Line, placing the 32,000-square-mile region of Arunachal Pradesh inside India. In the war of 1963, China conquered the entire state, claimed it as its own, and then withdrew its forces to the McMahon Line, restoring the ground situation to the status quo ante. Nonetheless, to this day, China claims the state while India administers its 1.4 million English-speaking inhabitants.\textsuperscript{27}

War has occurred over the Indian region of Aksai Chin as well. The border between India and China was drawn in 1865 based upon W. H. Johnson’s survey of India. Since China did not control the border region of Xinjiang at the time, the 1865 border became the de facto international boundary and remained so for nearly a century. In the 1950s, China infringed upon this territory in an effort to build a highway connecting Xinjiang and western Tibet, which ran through the middle of Aksai Chin. Initially the Indian government had no knowledge of this infringement since Aksai Chin is high in the Himalayas and difficult to access from the Indian side. Upon discovering the Chinese incursion, India took military action to regain control of its territory, anticipating no response. The two countries, however, went to war over the region in 1962–63, fighting in Aksai Chin and later in Arunachal Pradesh.\textsuperscript{28}

The Aksai Chin area borders the province of Ladakh in the state of Jammu and Kashmir, where China also stakes a claim. The state of Jammu and Kashmir was ceded to India by the Maharajah Hari Singh in 1947 by the Instrument of Accession.\textsuperscript{29} For the most part, this province has mostly been the site of militarized disputes between India and Pakistan, but China has not renounced its claims to the region.
These ongoing disputes threaten to ignite nationalist sentiments on both sides of each border, which is why China has moved to settle many of its other differences in recent years. The boundary disputes along China’s southwestern flank, however, seem more intractable than those already adjudicated.

Among the issues underlying these disputes in modern times is that of the spiritual leadership of the Tibetan Buddhists. The Chinese government appears concerned about the succession to the Dalai Lama. In Buddhist tradition, succession occurs via the process of reincarnation, and the Dalai Lamas have served as the spiritual and temporal rulers of Tibet since the 1500s. Evidently, China wishes to control the territory in which the new Dalai Lama will be born. Because the determination of whether a particular infant is in fact the reincarnation of the previous Dalai Lama takes time, often years, and because the region in which this child may be born is vast, China has attempted to lay claim to the entire area from which such a successor might emerge.30 Meanwhile, the Dalai Lama himself has attempted to take partial control of his succession by proclaiming that his successor cannot and will not be born in any territory held by China.31

Creation of a stable path forward for the Asia-Pacific region demands peaceful resolution of this dissension over land. Because religion and Tibetan spiritual leadership underlie the disputes in Bhutan and the northern Indian provinces, any solution should preserve the core interests of the claimants in this area. Even so, a set of waterborne arguments also threatens the stability of the region.
Ocean/Sea Disputes

Multiple incidents in recent years have escalated to shows of force at various levels. These include boundary disputes in the waters off the Korean Peninsula, disagreement between China and Japan over the Senkaku Islands, and a multilateral debate about the waters of the South China Sea.32

The dispute related to the Korean Peninsula has its roots in the 1953 armistice and subsequent changes in international law regarding maritime boundaries. The armistice between the United Nations (UN) Command, North Korea, and China did specify that the UN would retain control over a set of islands off the western coast of Korea generally along and south of the 38th parallel.33 The prevailing assumption at the time was that maritime boundaries extended only three nautical miles off the coast of a mainland. Several of these islands were more than three miles but less than 12 miles from North Korea’s Ongjin Peninsula. As more nations have adopted the 12-mile rule, the status of these islands under international law has become less clear, and as early as 1973, the US State Department began to question the legitimacy of the border arrangement. Simultaneously, North Korea began to challenge this demarcation line with freedom-of-navigation exercises.34

For years, the diplomatic rhetoric remained irrelevant because North Korea lacked a meaningful navy. As the North Korean navy developed, the boundary originally purposed to keep the South from moving north also prevented the new navy of the North from moving south. Additionally, the waters off the coast of Korea are rich in sea life and harbor a commercial fishing industry, creating a set of economic interests that overlay the border and security situation.
In 1999 North Korea redefined its interpretation of the demarcation line (also known as the northern limit line), resulting in the first of a series of violent disputes. The North Koreans had been pushing for a change in the demarcation line in accordance with the 12-nautical-mile territorial limit considered the norm in the UN. When these efforts failed to achieve the desired ends, North Korea crossed the demarcation line with torpedo and patrol vessels on 15 June. South Korea immediately repelled the attack, and the North Koreans lost nearly three dozen personnel. On 2 September 1999, they announced establishment of the “Chosun West Sea Demarcation Line,” which encroached significantly into territory under control of the UN Command, as agreed to in the armistice. Backed by the United States, the UN Command immediately protested this declaration.

The boundary dispute has remained heated, with incursions by North Korean military vessels occurring in 2002, 2004, 2009, and 2010. The most recent of these involved North Korean shelling of the South Korean island of Yeonpyeong, which damaged businesses and homes, killed four civilians, and wounded 10 more before South Korea responded by shelling North Korea’s mortar positions.

This conflict has adversely affected North and South Korea, both of which have lost property, military equipment, and lives. Moreover, they have not been able to use their fisheries and crabbing grounds—a robust economic resource—to the fullest extent.

A second area of contention concerns the island chain that the Japanese call the Senkakus and the Chinese refer to as the Diaoyu Islands. This archipelago contains five small islands in the East China Sea, the largest of which is a little over four square kilometers. The arguments of ownership on both sides are complex. In short, the Chinese claim the islands
based on their having been recorded in ancient Chinese maps and other documents since their discovery in 1372. The islands continue to appear in logbooks and other records in the 1530s and across the Ming and Qing dynasties. The Chinese acknowledge ceding the islands in 1895 but argue that their declaration of war against Japan in 1941 reversed this action and that they have belonged to China ever since.

Japan claims that the islands were unsettled and unclaimed as of 1895, when China ceded Formosa and all islands appertaining or belonging to Formosa in the Treaty of Shimonoseki, which ended the first Sino-Japanese War. Whereas China views this war as nullifying the Treaty of Shimonoseki, Japan argues that it never agreed to cede the Senkaku Islands or the prefecture of Okinawa, of which the Senkakus are a part. The San Francisco Peace Treaty, which formally ended the war, contains no such provision. Further, Japan holds that the islands came under its purview in the Okinawa reversion of 1971, when the United States transferred control of Okinawa to the Japanese. Adding to its claim, a Japanese citizen has developed the islands, and the Japanese government purchased them in a legal real estate transaction for 2 billion yen.

In recent years, the dispute over these islands, which may sit near an oil and gas field, has become more heated. China began to conduct military exercises near the islands in 2006. During 2010 in contested waters near the islands, a Chinese fishing vessel collided with two Japanese coast guard vessels, and the Japanese coast guard arrested the crew. In the wake of these incidents, anti-Chinese protests occurred in Japan, and diplomatic relations with China became strained. In March 2012, China moved two maritime patrol boats toward the Senkaku Islands, accompanying the Chinese foreign minister’s announcement of China’s “indisputable
sovereignty over the Diaoyu Islands.” These vessels did not enter the disputed waters, but on 7 July, three other Chinese vessels did. After a series of protests in and around the islands by both nations, anti-Japanese demonstrations flared in several Chinese cities, and relations between the two nations have become further strained.\textsuperscript{43}

As with the Korean imbroglio mentioned above, the Senkaku/Diaoyu dispute serves neither to create peaceful relations between the two largest economies in Asia nor to enhance economic growth. Unless and until the parties resolve this problem, resources in and around the islands cannot be developed, holding back the regional economy.

The most intricate dispute in the region lies in the South China Sea, including the Paracel and Spratly Islands, the latter representing the more complex of the two claims. Although some of these claims are long-standing, they have come to the forefront in recent years due to the prospect of significant fossil-fuel resources underlying this region.

China has claimed a vast tract of territory, including almost the entire sea, in its published “nine-line map” of the South China Sea (fig. 2.1). This term alludes to the nine dashes that demark China’s territorial waters shown on government-produced maps used in Chinese schools today (see the red line in fig. 2.1). This line encompasses a territory that includes both the Paracel and Spratly Islands; covers more than 80 percent of the South China Sea; and hugs the coast of Malaysia, Brunei, the Philippines, Vietnam, and Indonesia.
The disputed region encompassing the Spratly Islands lies within the claimed exclusive economic zone of China, the Philippines, Brunei, Vietnam, and Malaysia (fig. 2.2). All five nations actually claim only a very small portion of the islands, but the entire region of the Spratlys has at least three claimants.
China and the Philippines are engaged in two disagreements related to the South China Sea. The government in Manila sought to open new tracts of the seabed near Scarborough Shoal for exploration earlier this year, a process to which China formally objected. China declares that some of the Spratly Islands—many of them small, rocky outcroppings of land visible only at low tide—are humanly habitable and thus seeks to extend its 200-mile economic exclusion zone around these islands and into the region where Manila wants to drill. Within the Chinese claim is Pag-asa Island, one of the largest in the group, on which the Philippines currently maintains a small village. Pag-asa is also near the location where Manila wishes to drill for oil. Economic development remains impossible until the countries settle this dispute.

More recently, the region was the location of a military standoff between China and the Philippines. The incident began when several Chinese fishing vessels entered waters in and around the Scarborough Shoal on 8 April 2012. Filipino sailors responded by attempting to arrest the Chinese fishermen for poaching. China sent coast guard vessels to the region, which
were met by vessels of the Philippine navy. This “tit-for-tat” response escalated the show of force throughout April and May until China had 97 vessels, including some of its most advanced military ships, arrayed against a much smaller Philippine fleet. The standoff lasted for weeks, adversely affecting the Philippine economy, which suffered large-scale losses of Chinese tourism because travel agencies in China were forced to cancel numerous vacation tours. Additionally, China stopped fruit imports from the Philippines, causing a significant loss to the Filipino farming industry.

Even though no shots were fired, at the height of the conflict, the Chinese government-controlled media warned of war. In the end, the two nations pulled back from the brink, but diplomatic relations are strained, the area’s resources remain undeveloped, and the Philippines has lost significant trade and tourism dollars in the dispute.

Clearly, these border problems indicate that East Asia is anything but harmonious. The ongoing disputes, most of which involve China or its allies, continue to drain the Asian economy and produce tension in the region, leading to military buildups—sometimes in unexpected places.

Rather than move toward cooperation, countries in Asia have increased their defense spending, surpassing that of Europe. China, Japan, India, South Korea, and Australia are the key drivers of such expenditures in the region but not the only ones. Indonesia raised spending in 2012 by 35 percent in an effort to modernize its military as a deterrent to terrorism and to overcome “potential military aggression,” according to Pres. Susilo Bambang Yudhoyono. This buildup includes a $1.1 billion contract for at least 10 new submarines for the Indonesian navy. Similarly, Singapore’s military spending, at 4.5 percent of GDP, is one of the largest—per
capita—in the world. Totaling over $7 billion in 2012, its military expenditure exceeds that of its neighbors Malaysia ($5 billion) and Indonesia ($4 billion) but reflects Singapore’s realist view of international relations and the importance of South Asian geography.

China’s defense spending also continues to grow rapidly—a trend under way for approximately 20 years. In 1993 China’s outlays showed a real decrease of about 2 percent. Since that time, increases of 9 percent per year in real terms (over 30 percent in 1994) have been consistent. Recent upturns in Asian defense spending (fig. 2.3) indicate that the upward trend continues on an exponential path across the region.

![Graph showing military expenditure trends in Asia and Oceania, 1988–2011.](http://www.sipri.org/research/armaments/milex/resultoutput/regional/Milex_asia_ocean)


Looking outward over the next 10–20 years, we expect no decrease in Asian defense spending by the major nations across the region. Rather, it should remain on an exponential
curve, with China likely becoming the predominant ascendant military power in the area. Indeed, it is possible that in the next 20 years, China may emerge as a peer or near peer to the United States in the region, both on the ground and in the air. Meanwhile, India will invest heavily in procurement to protect its interests in the region, spending perhaps as much as $100 billion over the next 10 years alone.

These elevated outlays in Asia will not necessarily lead to war. Indeed, many scenarios suggest that armed conflict need not occur. Yet, the navies, armies, and air forces in the region are receiving large investments because territorial disputes and access to economically lucrative resources may hang in the balance. Asia may be in the midst of its own arms race—a contest occurring not as fast as its predecessor during the Cold War but one moving apace nonetheless. The question, however, becomes “a race to where?” Such contention seems counterproductive to realizing a harmonious or cooperative outcome.

**The Road to Pax Pacifica**

The above discussion makes two things clear. First, harmonious relations in the region depend directly upon the stability of the Chinese economy. If it collapses or its growth rate slows to a level not conducive to internal stability, then fully peaceful integration and cooperation will elude the Asia-Pacific region. Second, internal conflict in the region is antithetical to maintaining optimum economic growth. Existing boundary disputes have cost all sides economically, and as long as they remain unresolved, they will continue to do so.

Logically, this means that the path to full cooperation in this region is contingent upon stabilizing the Asian economies and upon finding either permanent resolution of the territorial disputes or, at minimum, agreements to jointly develop and share the resources in those
territories claimed by multiple states. To encourage this level of cooperation, the United States and its Department of Defense must follow a road that builds mutual trust, increases regional interdependence, and bolsters the prospects for economic growth, including that inside China itself. Such activities would require trust-building measures that entail finding a way for the US military and the region’s armed forces to work together in environments relatively free of the risk of conflict. Ideally, America would enhance its posture for humanitarian and disaster-relief efforts, thus cultivating peacetime diplomatic and economic relations with the major actors in the region, including China, India, Indonesia, the other states of the Association of Southeast Asian Nations (ASEAN), Japan, and Australia.

**Military-to-Military: Expanding the Humanitarian-Relief Posture**

To cultivate trust and relationships in the region on a road toward Pax Pacifica, the United States should use its basing rights there to position itself to conduct humanitarian-relief operations in response to the frequent natural disasters common to the Asia-Pacific. On the one hand, such a force posture would maintain US presence with the most crucial systems for reacting to crises (aerial). On the other hand, it would create conditions for deep engagement with the regional actors in a way that enhances communication and builds trust.

Asia routinely experiences natural disasters caused by both geological and meteorological phenomena. Every year, numerous tropical cyclones and typhoons as well as earthquakes occur, the larger quakes accompanied by devastating tsunamis. These events almost certainly will persist over the next 10–20 years. US posturing in a manner to assist with humanitarian-relief operations would give the United States the opportunity to partner with
regional militaries, including China’s, while offering services to the region that enhance US popularity and bolster the area’s economic interdependence and stability.

Typhoons in the Pacific Basin are so numerous that the World Meteorological Organization uses a different standard for naming storms in this part of the world. In the Atlantic Basin, a single alphabetical list suffices for each season, and every year the name of the first storm begins with an “A.” In the Pacific, however, the naming of storms merely continues where the last storm left off, with new lists started as needed—often multiple times per year.

In May 2008, Cyclone Nargis hit Myanmar, peaking as a category-four storm on the Saffir-Simpson Scale for tropical systems despite its depiction as a category-two storm (fig. 2.4). Nargis made landfall on 2 May 2008, killing a minimum of 80,000 people; 54,000 more were never found. Unfortunately, such effects are not unique—major storms routinely displace thousands in the region. In December 2011, for example, tropical storm Washi produced heavy rains that eradicated villages and caused tens of thousands to flee their homes.

Nargis and Washi are not the worst storms to hit the region. On 29 April 1991, a category-four cyclone struck Bangladesh, killing an estimated 138,000 people—a death toll held down by the building of storm shelters in the wake of an earlier cyclone that killed half a million people in Bangladesh in the 1970s.\(^{54}\) In the case of these cyclones and storms, flooding—which can also occur in conjunction with the annual monsoon—caused most of the deaths and destruction.\(^{55}\)

In addition to monsoonal flooding and major tropical storms, Asia is frequently the site of major earthquakes, some of which trigger tsunamis. Located on the western edge of the “Ring of Fire,” the heart of the Asia-Pacific region is highly prone to unstable geologic activity. Figure 2.5 shows a selected set of earthquakes in the Pacific Basin from 4 September to 3 October 2012. Using a US Geological Survey tool, the author plotted 7,029 earthquakes that occurred during these 30 days, each with a magnitude greater than 2.5 on the Richter scale. The Ring of Fire follows the tectonic plates, delineated by the figure’s red lines, from the west coast of North America, around the southern coast of Alaska, down the Japanese archipelago, and then into Indonesia and the Philippines. The color of the plot indicates how recently the earthquake occurred: red in the past hour; orange, the past day; and the various shades of yellow, weeks. The size of the square represents earthquake intensity.
While many of these tremors are small, the Asia-Pacific basin frequently experiences catastrophic earthquakes. Since 1 January 2011, 32 major earthquakes of magnitude 7.0 or greater have occurred within the region. Among these were five near Vanuatu; three, including a magnitude 8.6 and a magnitude 8.2 off the coast of Northern Sumatra; three just north of New Zealand; two in the Aleutians and in the Sea of Okhotsk; two near New Guinea; one in Fiji; and five on or near the east coast of Honshu Island, Japan, including the catastrophic 9.0-magnitude quake and its first aftershock of magnitude 7.9, both on 11 March 2011.⁵⁶

Although several areas of Asia have become accustomed to the shaking earth, the larger earthquakes play havoc with both the regional and global economy. For example, damage caused by the Japanese earthquake of 2011 continues to create economic challenges in Japan and across the world. The earthquake generated tsunami waves as high as 38 meters (124.7 feet), killed over 15,000 people, and destroyed the Fukushima nuclear power plant, resulting in
the evacuation of more than 300,000 people.\textsuperscript{57} Initially, millions were left in darkness and without water, and numerous manufacturers closed as a result of shortages of electricity and/or parts.\textsuperscript{58} This event rippled through the global economy and reverberates today as nuclear plants are now being shut down worldwide out of concern for their vulnerabilities. The World Bank estimates the global impact at over $230 billion.\textsuperscript{59}

Most nations of the Asia-Pacific cannot cope effectively with disasters of this magnitude, yet they remain part of the tapestry of the region. Therefore, those countries have welcomed and will likely continue to welcome a US force posture capable of assisting them in recovering from these events. In the wake of the earthquake and tsunami in Indonesia, the US government sent $950 million in direct humanitarian assistance to the people of that nation.\textsuperscript{60} Much of this assistance arrived by Air Force aircraft and a Navy carrier battle group. The Indonesian people have not forgotten. Popular opinion polling suggests that relief provided in the wake of these disasters completely altered the attitude of most Indonesians about the United States during US operations in the wars in both Afghanistan and Iraq. This transformation is remarkable in light of the fact that many Indonesians are Muslim, some of whom consider the US wars in the Middle East an attack on their faith.

Such change in opinion was partly driven by the press. Indonesia’s weekly news magazine \textit{ Tempo} called the assistance by Western nations “heartwarming”; moreover, the goodwill spilled over into negotiations between the government and rebels in the Aceh province, leading to a peace agreement in 2005.\textsuperscript{61} The humanitarian assistance also caused Indonesian public opinion of the United States to change. In 2004, 66 percent of Indonesians viewed the United States unfavorably. A poll taken in 2006 indicated that for the first time since
the war on terrorism began, a majority of Indonesians looked favorably upon America. Sixty-three percent of Indonesians had changed their views, laudatory opinions tripling since the earthquake and tsunami.62

Equally important, this goodwill manifested itself even in places removed from the disaster. In Pakistan, 78.3 percent of respondents had a more favorable view of the United States because of the relief efforts. The poll also showed that 81.3 percent of Pakistanis who responded felt that American assistance was either very important (40.9 percent) or somewhat important (40.3 percent) in shaping this changed opinion.63

By being a “good neighbor,” the United States can not only open doors to bases and access but also develop a working relationship with other militaries, including those of the major ASEAN states and China. Relief efforts build goodwill. Further, these types of activities can help cultivate trust and cooperation within Asia as well as ensure that the United States retains access to and a presence in the region.

The US Department of Defense can play yet one more role in an effort to better integrate itself into a tapestry of relations that becomes Pax Pacifica: assist with issues of piracy, a constant irritant in parts of the South China Sea and in areas of the Strait of Malacca. Many episodes amount to petty theft, insofar as pirates board and raid an anchored vessel awaiting an entry slot into a harbor in the middle of the night, making off with valuable cargo and/or personal items from the crew.64 Even though cooperation and the sharing of data on ship location among the major states in the region have rendered major incidents infrequent, some still occur.65 US cooperation in the area of surveillance may assist in ensuring even freer navigation of the seas. Further, such integration of data and communication systems that
increases ASEAN’s fidelity of shipping information would enhance interconnectivity and resolve issues with communications compatibility in peacetime, producing benefits should any crisis ever occur.

No Conflict Anywhere?

In the narrative that leads to Pax Pacifica, one might point to Taiwan and its relations with China as the proverbial elephant in the room. Predictions of wars between the island of Formosa and the mainland have circulated for decades and continue even today. However, little evidence suggests that the two remaining disputants in the Chinese civil war of the 1940s will necessarily resume taking up arms against each other. Although such a scenario is certainly possible, recent events indicate that the two entities may well be on a path—albeit a very lengthy one—toward some form of peaceful reconciliation.

It is important to note that China’s threshold for the onset of conflict over Taiwan is rather high. Set in the “Anti-Secession Law of 2005” under the current Chinese leadership, the triggers for war with Taiwan include (1) events leading to the “separation” of Taiwan from China in any name or (2) a major event precipitating Taiwan’s “separation” from China, or (3) loss of all possibility of peaceful unification. One should note that, under mainland Chinese law, the existence of some possibility of peaceful accommodation at an undefined point in the future would obviate the triggers for conflict. Only a unilateral declaration by Taiwan of its permanent independence—an act far more reckless than anything contemplated, even by its most nationalistic parties—would engage the triggers.

In fact, the most nationalistic party in Taiwan is moving in the direction of reconciliation. In early October 2012, former Taiwan premier Frank Hsieh—now the head of the nationalist
Democratic Progressive Party (DPP)—embarked on a tour of mainland China, marking the first-ever visit by such a senior member of the party to the mainland. The trip sought to “build mutual trust” and show that the DPP is as capable as its rivals of managing relations between business firms in Taiwan and mainland China. Having lost the last two national elections to its rival, the Kuomintang Party, the DPP is now rethinking its approach to China because Taiwan is benefiting from less strained relations with Beijing. Therefore, the probability that Taiwan will cross any of the thresholds that would trigger armed conflict across the strait seems lower now than at any time in the recent past.

Although other hot spots remain, including the boundary disputes mentioned above, if the United States can become a partner in the region, other nations will look to it to assist in mediating disputes or finding a neutral party that can. The road to Pax Pacifica may contain potholes, but it is not necessarily a dead end.

**Discord or Harmonious World?**

Shift has happened. Asia has a larger GDP than North America’s; indeed, even the East Asian crescent has a larger GDP than that of the United States, Canada, and Mexico combined. It is a new world.

As with all places and all times, the future has many possibilities. If we desire a peaceful Asia-Pacific Basin, then such an outcome hinges on the maintenance of economic growth and stability in the region. This, in turn, requires not only strengthening diplomatic and economic ties, a subject that lies outside the scope of this study, but also building trust in the military and informational realms. Here, the United States and its Air Force can play a significant role as America “pivots toward Asia.” Using our resources to assist the Asian region in rapid recovery
from the ever-present string of natural catastrophes will strengthen that area’s economy and, by extension, interdependence and trade, thus enhancing the probability of peace.\textsuperscript{69}

Efforts to position airlift assets as well as those that can help rescue and provide for victims of disasters will enable the Air Force to develop working relationships with potential and future partners in the region, including China. Doing so will give the United States access to basing and ensure pre-positioning of the very assets most crucial at the onset of crisis, should another future become more likely. Such a path enables the United States to work for peace and simultaneously hedge its bets. It is the only path that leads toward a harmonious world.

Yet, other routes are possible—discord among them. Toward that end, this study explores a path leading to a far darker future—a direction more likely than the peaceful one painted here. To analyze the capabilities that we will most likely need to confront all of the future scenarios, we must consider these other possibilities.

Notes


5. The US gross domestic product (GDP) rose from approximately $200 billion in 1940 to $300 billion in 1950. Christopher Conte and Albert R. Karr, \textit{An Outline of the U.S. Economy} (Washington, DC: US Department of State, 2001), chap. 3. The United States’ monopoly on


9. The term *Asian Millennium* comes from Engelbrecht et al., *Alternate Futures for 2025*, 70.


30. This is further complicated by the role played by the Panchen Lama in the verification of the reincarnation of the Dalai Lama. After the Panchen Lama died in 1989, two separate Panchen Lamas have been named—one by the Dalai Lama’s committee and the other by China. The struggle for legitimacy of the Buddhist spiritual leadership continues today. See Isabel Hilton, The Search for the Panchen Lama (London: Viking Books, 1999).


32. Other disputes, such as that over the Hibernia Reef between Australia and Indonesia, have remained unmilitarized and do not appear to substantively affect international relations at present.

58


38. Ibid., 12–14.


42. “High-Seas Collisions Trigger Japan-China Spat,” Agence France-Presse, 7 September 2010, http://www.google.com/hostednews/afp/article/ALeqM5gfux6suEvhsCmNJgxMYAYK68ZIQ.


44. Some of the Spratly Islands are large enough to maintain small settlements. Pag-asa Island, currently controlled by the Philippines and consisting of a small town and a staff of two officers, is large enough to host a small gravel airstrip. It is one of the four largest islands in the Spratly “Archipelago.”


48. Cuneta and Hookway, “China Dispute.”


50. McElroy, “Chinese Media.”


55. Monsoonal rains are seasonal events associated with a band of concentrated moisture that moves seasonally with the sun in and around the equator. The autumn 2011 Bangkok floods were caused by heavy monsoonal rains. These floods submerged the Bangkok airport and parts of its downtown district, caused a 2 percent reduction in Thailand’s GDP for the year, killed more than 600 people, and affected more than 13 million others. This event is considered one of the five most expensive disasters in human history. See Bo Zhang, “Top 5 Most Expensive Natural Disasters in History,” Accuweather.com, 30 March 2011, http://www.accuweather.com/en/weather-news/top-5-most-expensive-natural-d/47459; and


57. According to numerous reports from eye witnesses as well as survey teams, wave heights in the Iwate Prefecture reached approximately 38 meters. Among these are the 4 April 2011 editions of the Japan Times and the 3 April 2011 edition of the Kyodo News.


60. By some accounts, Australia may have contributed as much as $1.2 billion (US) in assistance, making it the top contributor of disaster aid to the region.


64. Conclusion derived from several “off the record” interviews with various government officials and academics from across ASEAN during an international conference in Singapore in March 2012.


67. The title of this section is based on a larger work on alternative futures for China. See Geis et al., Discord or “Harmonious Society”?  

68. “Global Population Statistics.”
Chapter 3

Worst Case: Nations in Conflict

Stephen J. Hagel

*It is as likely as not that ten or twenty years into the twenty-first century, the leading polity for the West will be contending at least in cold war with another worthy superstate foe, possibly a selectively modernized China. Whether the future holds a Chinese or a resurgent Russia as such a foe, the story-line of strategic history is probably the same.*

—Colin Gray
*Modern Strategy*

Making pronouncements about the future state of affairs is prone to error, oversimplification, and criticism—none of which this author expects to avoid. We must, however, consider that future. Since we tend not to engage in the wars we expect to fight, failure to think about uncertainties—even though none of them may materialize—leaves a nation vulnerable to risk, surprise, and, potentially, defeat.\(^1\) The United States must think through ambiguous possibilities and ready itself for them.

In less than a decade, America could find itself in a cold or even a hot war in the Pacific with a nuclear-capable adversary such as North Korea, Russia, or China—perhaps all of them. In March 2013, the Director of National Intelligence noted that North Korea’s nuclear and ballistic missile programs pose a serious threat to the nation and that Russia and China “remain the most capable and persistent intelligence threats and are aggressive practitioners of economic espionage against the United States.”\(^2\) North Korea is a known unknown—provocative and unpredictable. A realist view of regional politics suggests that major powers, or those that see themselves as such, will seek to secure their interests in the Asia-Pacific region while
diminishing the leverage of states that might oppose those interests. Countries such as North Korea, China, or even Russia all have vital interests in this region; they also have the means—whether military, economic, or diplomatic—with which to attempt to perpetuate them. This situation will likely produce conflict at the expense of neighboring countries and possibly the United States. What form that conflict will take is uncertain.

Discord is almost always present, even among friends and allies. A widely used definition for “conflict” describes it as “the perceived divergence of interest, or a belief that the parties’ current aspirations cannot be achieved simultaneously.” In short, conflict is a form of disagreement. For example, tariffs among the closest allies may trigger strife if one nation considers trading unfair, but this type of conflict does not lead to war.

Unfulfilled aspirations do not have to bring about fighting. Yet, as history shows, many different factors can come together to escalate conflict until war breaks out. In the worst-case scenario presented below, war is not inevitable. Yet, without preparation and planning, conflict among great powers could culminate in war. Nations in this scenario engage in economic and territorial dissension, one in which a limited dispute could inadvertently escalate with undertones of military force. How that might manifest itself and what role the US Air Force needs to fill in the region are the focus of this chapter as it examines airpower’s part in the Asia-Pacific at the end of this decade. Now is the time to plan and prepare.

The Asia-Pacific Region

The Asia-Pacific region is home to the four most populous countries in the world, five nuclear countries, five of the world’s six largest economies, 15 of its 20 largest ports (nine of which are in China), more than 50 percent of the planet’s population, six of its largest militaries
(China, the United States, India, North Korea, Russia, and South Korea), and five nations allied with the United States through mutual defense treaties (Philippines, Thailand, Japan, Australia, and South Korea).⁵ Home to diverse ethnic groups, religions, economies, ideologies, and history, the Asia-Pacific has seen many wars—big and small—often over resources.⁶ Such clashes, as well as disputes regarding boundaries and lands taken in previous conflicts, are common.⁷ Ancient animosities between nations still erupt over past injustices and atrocities.⁸

Military and economic muscle flexing persists as nations strive to protect and advance their status in the region and in the world.⁹ A recent assertive action—the national purchase of the Senkaku Islands by the Japanese government—stirred up a wave of nationalistic fervor in both China and Japan.¹⁰ Whether these nationalistic demonstrations were merely in commemoration of the end of World War II, political maneuvering to divert attention from other issues in these countries, or something greater remains to be seen. However, the frequency of this type of militant nationalism across the region appears on the increase as countries express their claims to territory.

Compelling nations in the region to resolve these matters is no easy task. No international institution in Asia holds any enforceable power that will/can pressure countries to act outside their own national interest. Even the United Nations is only as powerful as the members of the Security Council allow it to be, and US-led efforts are often blocked by other members of the council, particularly China and Russia.¹¹ Although US policy indicates that we will not choose sides in these debates about regional claims, it is precisely this type of muscle-flexing incident that could lead to US military action.¹²
Economic events during the last decade have affected the region in different ways. Arguably, developed countries like Japan, the United States, and much of Europe suffered most in the global recession, and their growth rates probably will remain low. The decline in US economic power revealed a crack in America’s armor, giving pause to some nations and prompting them to rethink their positions.

Unlike its impact on developed economies, the global recession arguably affected expanding ones less severely, and they recovered more rapidly. Most regional economies continued to grow, albeit at a slower rate than in the early 2000s. The economic fate of some, such as Russia, was tied to fluctuations in the price of hydrocarbons, bringing times of significant prosperity when the price per barrel topped $140 as well as times of contraction when the cost of European Brent crude dipped to under $34 per barrel.13

Asian trade is on track to pass that of other regions, including the European Union. For developing Asia-Pacific economies as a whole, the World Bank notes that those economies grew at a 7.5 percent rate in 2012 and predicts 7.8 percent growth for 2013.14 Trade between the United States and the Asia-Pacific economies is estimated in excess of $1 trillion annually, but America’s share is diminishing. The declining US portion of economic markets in the region has been absorbed by China, which boasts the world’s second-largest economy. China’s economy propelled it to an influential position as the largest trading partner of Japan, India, Taiwan, Australia, and South Korea—all allies or partners of the United States. In fact, nearly every country in the Asia-Pacific region has China as its number-one or -two trading partner, making East Asia an economic powerhouse with China as the main player.15
China not only is a key trade partner but also finances world consumption, having the United States as its greatest market.\textsuperscript{16} China continues to hold a large and growing portion of US debt (and that of other nations as well). The two countries accuse each other of protectionist economic policies such as imposing limitations on foreign direct investment and import/export quotas or manipulating currency (in the case of the renminbi). Issues with trade sanctions between China and the United States as well as China’s holdings of American bonds restrict or potentially harm both economies, creating additional opportunity for conflict.

Economics plays a significant role in this worst case, but recent and upcoming leadership changes are expected to influence events as well. Examining some of these changes in the next decade adds another dynamic to the uncertainty of the Asia-Pacific in 2020. The United States will have had at least one change in presidential administrations. Other leadership in the Asia-Pacific region will have changed as well—consider Russia’s selection of Vladimir Putin to lead that nation once again; China’s turning its leadership over to Xi Jinping, one of its young princes; India’s shift in government in 2014; the emergence of conservative, nationalistic Prime Minister Shinzo Abe in Japan; South Korea’s choice of President Park Geun-hye, its first female and a pragmatic conservative; and the recent handoff of power in North Korea to Kim Jong Un, to name a few. Each change brings an adjustment of national focus and, in some cases such as Pyongyang’s, a virtually unknown course.

Much has changed over the last decade. Europe’s importance has waned in the eyes of some, and many nations now focus on the Asia-Pacific. The recession, which affected much of the globe, stimulated the rise of some nations and the decline of others—especially the goods-consuming Western nations. The influence of rising (and declining) oil prices on national
economies has energized a renewed quest for hydrocarbons to power growing nations and to keep economies stable. The goods-producing economies in much of Asia continued their rise—especially China’s economy, which has become the second largest in the world. For the United States, a host of factors converged (economic decline, debt crisis, reduction in military forces, decline of the dollar, and the perceived decrease of America’s worldwide influence), creating an opportunity for other nations to fill the void.

Across the region, one encounters concern about the rise (or resurgence) of new regional/global powers and what that might mean in terms of a potential shift in the regional balance. Accelerating competition for resources—particularly hydrocarbons, minerals, water, and food—is driving conflict in the region and a growth in military spending by many nations. The proliferation of cyber and other advanced technologies has caused apprehension about the threat of commercial attack, high-tech conflict, or even the possibility of a nuclear-state failure. The future is indeed uncertain.

A Possible Future

Dr. T. X. Hammes suggests that we are in a strategic pause of a decade before any near-peer competitor truly rises. He suggests that only China is close and that Russia will require over a decade to rebuild its forces to anything capable of challenging the United States. Although they are strong countries, both must contend with issues at home, including the suppression of domestic terrorists, development of critical infrastructure and markets for domestically produced goods, and the securing of needed resources for the well-being of the population and economic growth. In China’s case, the growing population, falling revenues, and an expanding middle class are all concerns. Russia must contend with a declining population, a sluggish
economy, and a weak Far East. Some of these issues may actually require cooperation with the United States rather than conflict, affording it the opportunity to help shape the uncertain future and avoid confrontation. If indeed we are in a strategic pause, however, now is the time to prepare.

This worst case does not reflect China exclusively; rather, it could unfold with a number of countries in the region. As we benchmark our capabilities for a worst-case scenario, though, we cannot ignore a rising nation with 1.3 billion people and a growing military—especially one that has displayed tendencies to use coercive economic and military force upon its neighbors. To discount China and swallow the peaceful rise and harmonious rhetoric spouted by its leaders and academics would be tantamount to stupidity. One 2011 study noted that “since 1989, official Chinese defense spending has increased by nearly 13% annually. This has occurred despite the fact that all major powers in the 1990s were cutting defense budgets and China itself faced no serious security threat from any of its neighbors.” Advertised expenditure on defense amounts to more than $79 billion; however, guesstimates range from double to triple that figure. Furthermore, rather than spend across the globe, China maintains a very regional concentration. More recently, Beijing announced that the country’s defense budget would increase 10.7 percent to $114 billion although US estimates of China’s actual total expenditures fall between $135 and $215 billion. Whether spending continues at that rate is uncertain, some experts suggesting that China’s growth rate will decrease, preventing the country from surpassing the United States for some time. Yet, although America’s Pacific pivot concentrates on China, it does not exclude other concerns in the region that the United States must also consider as it examines worst-case scenarios.
As indicated earlier, the growing aggressiveness regarding territory in a region potentially rich in oil and gas involves many countries, not just China. As developing nations develop and expand their economies, competition for resources emerges—oil to drive the economy, water for agriculture, and rights to fishing waters. Great economic competition often generates heightened economic conflict with protective policies that restrict free trade. In these cases, conflict resolution bogs down, distrust of other nations’ intentions prompts military modernization, and the likelihood of a smaller skirmish within the region escalates into a major power struggle between nuclear-capable nations. As balancing in the region progresses, an alliance of convenience among Russia, China, and North Korea—three nuclear-capable states—forms on one side. In fact, others have addressed this possibility. Former secretary of defense Robert Gates, former secretary of state Hillary Clinton, and others have spoken of the threat that China, Russia, North Korea, and Iran pose to the United States, accusing them of being the greatest threat to the nation, based upon their nuclear ambitions, the proliferation of weapons of mass destruction (WMD), their growing attempts at exerting influence in the Western Hemisphere, and their pursuit of modernized, high-tech military weapons. In fact, China and the Democratic People’s Republic of Korea (DPRK) are suppliers to Iran. The actions of China and the DPRK have created collective concern among many smaller nations in the Asia-Pacific—along with Australia, Japan, South Korea, the Philippines, and Singapore—and they are looking to the United States to act as the “balancer of last resort.”

Russia

With Germany fully in control as the economic hegemon in Europe, Russia will have influence in Europe but not the kind it might like to have. Economically, Russia is not doing well,
largely because two of its main industries—armaments and hydrocarbons—are subject to substantial export fluctuations. Russia will continue to use its energy resources as leverage with other countries, particularly those in the former Eastern Bloc; moreover, as the number-two arms exporter in the world, it will persist in selling arms where the West will not—Venezuela, Iran, and Syria. Russia was hit hard by the global recession and the downturn in its oil revenue—perhaps more so than most developed countries. To remedy that situation, it has designated economic growth as its principal goal, but Moscow would like to reach that objective on the back of a more diversified and balanced economy rather than on the volatile hydrocarbon markets. That said, the country’s energy strategy calls for significant growth in this area, in part from expanding exports to China via the East Siberian oil pipeline. Russia has recently attempted to create a Eurasian Union to counter the European Union, seeking to expand its influence once again to the West as well as to former Soviet states. However, Russia’s success in this effort is slow in coming, insofar as some of the former republics are looking for opportunities elsewhere.

Russia is also launching its own “pivot to the Pacific.” In light of ongoing increases in the level of trade along the Pacific Rim and the now-seasonal opening of the northern sea lanes, the country has both incentive and opportunity to reinvigorate the Russian Far East and export its natural resources to Japan, China, and South Korea—neighbors in great need of coal, minerals, oil, and natural gas. Moreover, those nations are only a couple of hours away from the Russian seaport of Vladivostok. Russia’s population in the Far East is considerably smaller than that of the Chinese Northeast, so opening up this region may also spur Russian migration as economic opportunities arise. Russia has signaled that its intentions are also directed at the
Korean Peninsula by forgiving a $10 billion debt and investing $1 billion in energy, infrastructure, health care, and education projects in North Korea. During the Soviet era, Russia’s economic impact in the region was quite small, so the nation exerted its military power. Today, even though Russia’s military remains the second-most powerful in the world, those military resources have dwindled, prompting the country to emphasize economic influence. However, that is not to discount the $650 billion in Russian military modernization and expansion that will include fifth-generation fighters and attack helicopters.

Moscow’s post—“Russian reset” rhetoric does not favor the United States (e.g., America’s failure to secure Russian support of a Syrian initiative and nonrenewal of the Nunn-Lugar Cooperative Threat Reduction program on dismantling nuclear and chemical weapons), but its relations with China are improving. Russia’s distrust for the United States, its concern over encirclement by Western nations in Eastern Europe and Central Asia (even into countries of its former Soviet Bloc), and its desire to reclaim respect as a great nation are moving it toward a “Eurasia vision” of a common economic space by 2015. According to this vision, Russia will play a key role, balancing the United States–European Union alignment and serving as a hedge against the influence of China in Asia. Moscow’s bargaining chips are its coal, gas, and oil resources; its military technology; and its still-formidable military.

Russia’s military, although not what it was in the days of the Cold War, remains the fourth largest in the world, possessing more nuclear weapons than any other country. Its hardware and forces, however, are atrophying. President Putin would like to stem that trend by modernizing the Russian force. Indeed, the military is working on and fielding new concepts and capabilities for its tactical and strategic nuclear arsenal, seemingly ignoring the New Strategic
Arms Reduction Treaty (START). Those fielded systems would include the Yars-M intercontinental ballistic missile (ICBM) with 10 independently targetable warheads. Also in development with expected fielding in 2020 is a new strategic bomber as well as a rail-mobile ICBM (prohibited under the early treaties but not in New START). In 2012 Russian military expenditures rose by 16 percent with expected increases for the next several years as the military upgrade proceeds. However, given the state of its economy, this increase may well place additional financial stress on the already-burdened economy.

Despite issues of mistrust between the two powers as well as matters of competition, Russia and China have much in common, such as a long border and weak neighbors surrounding them on land. Both would like to keep their peripheries stable and their less-populated regions under control. Additionally, both have a vision for regional power and a desire to keep the United States neutralized in what they consider their neighborhood.

Both nations believe that US development of its ballistic missile defense system poses a threat to the current strategic-deterrence balance. Providing that capability to other countries in the region—such as Japan to defend against North Korean missiles—has not set well with either country. Like Russia, China considers the United States its greatest national security threat and, like Moscow, has come to believe that America is practicing a strategy of containment. The expanding US influence in the region only reinforces this view. Recent announcements regarding the United States’ pivot to the Asia-Pacific caused some concerns in the region, perhaps the greatest from China. The Chinese and the Russians feel constrained by US forces positioned in Central Asia, Japan, and South Korea; the announcements of potential US commitments with Australia, the Philippines, and Indonesia; and even some State
Department visits to Burma—all of which they assess as containment.\textsuperscript{29} Efforts to convince them otherwise have not been well received.

\textbf{China}

China has found itself in an enviable position over the last two decades, its success resting at least in part on its double-digit economic growth. Experts do not believe that such growth will continue, but some feel that before 2020 China will surpass the United States as the world’s largest economy, exceeding the US gross domestic product (purchasing power parity) by 2017.\textsuperscript{30} Others are less certain and suggest that its growth rate will decrease and not surpass the US economy for some time. Whether China’s economic rise proceeds on the present course or whether its double-digit growth stops for a few years is nearly a moot point. It has become the world’s second-largest economy and is the regional powerhouse in the Asia-Pacific—proximity has its advantages. This success has also helped maintain a level of regional stability. Yet, if China is to sustain its economy and maintain internal stability, some have opined that it will need at least a 7 percent growth rate.\textsuperscript{31} The country must create 25 million jobs a year in order to sustain economic growth for the next generation and therefore preserve the Communist Party.\textsuperscript{32} Chinese spending on internal security is growing yearly. In 2010 it surpassed military expenditures, and the trend continued with a rise of 11.5 percent in 2011 to $111 billion—to suppress an estimated 90,000 mass incidents reported by the Chinese government.\textsuperscript{33}

In addition to internal issues, China has border disputes with its neighbors. Although it has settled many of them in the last 15 years, several border conflicts or disagreements concerning land persist, causing stress in the region. Among those ongoing border issues is
dissension with India over Tibet and Kashmir, with numbers of violations and incursions on the rise. More often in the US news, however, are disputes over the various islands off the coast of China, including the Diaoyu Islands (the Chinese term) or the Senkakus (the Japanese designation) in the East China Sea and the Paracel and Spratly islands in the South China Sea. Diplomatically, the contested territories may be a matter of national pride and have been leveraged in that way to garner domestic support. Economically, ownership of those islands and subsequent expansion of the exclusive economic zone around them may also produce needed food from the tremendous fishing in the waters and wealth in the form of hydrocarbons. Obvious concerns about China include internal strife and unrest, changing of the guard, border issues, and economic decline. As the nations of the region continue to worry about China’s intentions, they will abide in their hedging position—aligning with the United States as the protector of choice.

China’s economic prosperity has generated an internal consumer market and an expanding need for petroleum. Although it is the fourth-largest producer of oil, China is also the most prolific consumer of petroleum, importing a significant percentage of its needs. About half of its oil comes from the Gulf via the Strait of Malacca although the opening of several pipelines from Russia (supplying about 10 percent of China’s petroleum) and Central Asian countries into China has slightly offset reliance on the Strait.34 China would prefer to eliminate its dependence on any one avenue or source of oil. The United States has become less reliant on oil imports from outside its hemisphere, but China, along with India, has more than absorbed that amount. Oil prices, which began rising in 2010, have continued to increase, benefiting oil-producing countries significantly. As the world’s second-largest producer, Russia arguably has benefited
the most. China’s expanding needs for oil to help fuel its economy and Russia’s abundance in petroleum and natural gas resources make this an economic union of mutual advantage, helping to keep both countries’ domestic politics and populaces stable. The confluence of Russian resources and the Chinese need for those resources and plenty of money to pay for them produces a convenient alliance.35

This relationship is not a reinvention of the Cold War’s Sino-Soviet axis of power but an alliance of convenience precipitated by increasing energy needs, economic and trade issues, restlessness among a growing middle class, rebalancing from the United States’ pivot to the Pacific, and a perceived decline in US influence abroad. We have reasons to expect that Russia may lean more toward a rising China and the burgeoning economies of the region rather than toward powers in perceived decline—Europe and the United States. The mutually advantageous binding of needs between the two most formidable nations in the region—China and Russia—will be more economic than military in nature.

Some may argue that an alliance of convenience between Russia and China is unlikely. Rather, they believe that Russia is more likely to choose to align itself with the West—with Europe, as it has tried to do in years past, or perhaps with the United States, as have other Pacific nations to offset China’s growth. Yet, other indications suggest a different path for Russia. For example, at the Asia-Pacific Economic Cooperation (APEC) meeting in Vladivostok, President Putin selected Hu Jintao as the opening speaker. Perhaps significantly, President Hu Jintao and Premier Wen Jiabao made their last visit to Moscow, and President Xi Jinping made his first official visit there. In addition, the new Russian defense minister visited China first, in November 2012, developing a preliminary agreement for more military cooperation as well as
potential sales of 24 Russian Sukhoi-35 fighters and other military hardware. Further, as the United States strengthens its ties with India and continues to work its bases in the former Soviet Republics, which sit on the southern flank of Russia and on the western flank of China, both Russia and China will suspect the United States of surrounding, encircling, or perhaps containing them. This containment, as it may be viewed, is an issue that both China and Russia would agree upon, considering neutralization of America in the region a possible solution.

Although its strategy for growth would indicate that China will keep a low profile and make steady, calculated moves, it has a significant military presence in terms of both manpower and hardware. Much discussion has rightly addressed the Taiwan Strait, but China is not limiting itself to the near term. Instead, that country is expanding its reach through investment and development in power-projection assets to complement its fighter and short-range missile capabilities. Strategically, China holds impressive cyber capabilities and is expanding its space program. The Chinese blue-water-capable navy is in its early stages of development and has deployed. Ballistic missile development continues as well, with China refining its DF-21D antiship missile, which has a range of at least 1,500 kilometers. It is also exploring acquisition or development of heavy-lift transport aircraft, a strategic asset that China sorely lack. Given its sizeable military budget, China’s strategic and tactical capabilities will only improve.

For Beijing, flexing of its economic might and growing military capabilities in diplomatic situations is causing concern among its neighbors. China is working oil and gas agreements with Moscow, but it continues to take action to insulate itself from dependence on Russian oil by padding its resources from the greater Middle East, Africa, and South America, and by pursuing
options in coastal waters in the South China and East China Seas. This latter exploration remains a contentious issue with many of the countries that also hold “claim” to these waters. Although the Association of Southeast Asian Nations (ASEAN) and APEC are fine diplomatic bodies, they have neither military forces nor directive authority to enforce any decisions. Fewer incidents of conflict occurred than in previous years; however, negotiations to resolve the disputes continue to bog down. The combined failure of these discussions and of the pertinent multinational organizations to resolve these disputes has pushed the smaller states, sometimes reluctantly, toward the United States as a counter. This move is opening channels of communication and opportunities for the United States to enhance its partnering within the region, both economically and militarily.

**North Korea**

The DPRK, or the Hermit Kingdom as some call it, is in a class of its own. The nation has an abundance of minerals, including uranium, which it mines and enriches for export or its own use. North Korea has a sparse economy, few friends, but a large military with nuclear weapons. The commander of US Pacific Command pointed out that the Asia-Pacific suffers adverse effects produced by North Korea’s nuclear weapons and missile capabilities, its proliferation of WMDs, its selling of associated WMD technologies, its conventional threat to South Korea and Japan, and its potential instability. The DPRK’s willingness to employ aggressive measures in the region makes it a significant threat. Having attacked South Korea in the West Sea three times in the last decade, the DPRK most recently (2010) launched a torpedo strike on the *Cheonan*, killing 46 South Korean sailors and shelled Yeonpyeong, resulting in four deaths. In light of the
transition of power to Kim Jong Un and some demotions or purging in the military ranks, one does not quite know how to view this reclusive nation.

As a politically and economically isolated nation, North Korea uses the tools at its disposal to keep the world and region off balance and its people under control. The nation wishes to be seen as legitimate and coequal with others in the region. Since it has little to offer, the DPRK resorts to aggressive behavior in the form of limited military actions and nuclear saber rattling. Additionally, to keep its people in line, the propaganda machine takes a “them against us” stance, but its internal stability remains questionable. Regime survival and protection, whether from within or without, are one of Pyongyang’s main goals, and opposition from groups within the country remains the DPRK’s greatest security concern. Although many would like to see a reunification of the peninsula, few would want it to erupt into the chaos of cross-border conflict in South Korea and China, accompanied by a mass exodus of refugees.

One of North Korea’s main exports is military-related equipment and technology. Certainly, much of its military equipment is old but may still be useful to other nations, particularly those on the US enemies list, such as Iran, Pakistan, Libya, and Syria. Besides hardware exchanges, Pyongyang also exports technologies and materials, including the nuclear variety. Although it is divesting some of the old equipment, the DPRK is upgrading its conventional capabilities—witness the country’s space or missile launches. Not as capable as either Russia’s or China’s, North Korea’s cyber assets are nonetheless fairly robust, as reflected by their denial-of-service attacks and computer exploitations aimed at South Korea.

North Korea does not have an alliance with China but may expect that it will come to Pyongyang’s aid diplomatically, economically, and, possibly, militarily. Over time, it has become
obvious that threats and sanctions do not discourage the North Korean leadership. China and Russia will persevere in keeping the North Korean people fed and the military machine gassed and oiled. The DPRK has made some movement toward economic change (or at least engaged in rhetoric regarding the matter) that, one might hope, would open the door for others to enter North Korea’s marketplace. This in turn would reduce its dependence upon China and, to a lesser extent, Russia. Expanding the economy might also help reduce some of the food shortages that have plagued this backward nation. Both China and Russia have a vested interest in North Korea’s internal stability yet allow Pyongyang to keep the rest of Northeast Asia off balance with its military provocations. China’s and Russia’s inability to “control” their troublesome nuclear client state has continued to heighten tensions in the northern portions of the region.

Some early progress in the direction of reform seemed to occur in early February 2012, but the younger Kim pressed ahead with a “satellite” (not a missile) launch in April 2012. Although it failed, this action irritated North Korea’s regional neighbors and the United States, placing the region in a higher state of readiness and stalling progress once again. In previous years, rocket launches were followed within weeks by a nuclear test. The testing of a nuclear device would have had serious effects on the peace process and regional balance of power. This time that nuclear test did not take place, perhaps indicating a more restrained and cooperative North Korea, one more interested in peace and progress. That hope proved short-lived when in December 2012, Pyongyang again conducted a space launch, using its Taepo Dong 2 missile as before—this time successfully. Recovery of portions of the rocket has led experts to believe that North Korea does indeed have the capability to miniaturize components sufficiently to
create a nuclear warhead and launch it. Following this launch, as has been its pattern, in
February 2013 the DPRK conducted its third nuclear test, once again violating United Nations
Security Council resolutions.

North Korea is known for using “bait and switch” tactics as part of its diplomacy. In years
past, Pyongyang would “play nice” until it received food, money, or some other relief and then
walk away from the peace process or provoke an incident with one of its neighbors, such as the
shelling of the South Korean island of Yeonpyeong, mentioned earlier. Some experts believe
that these provocations are designed to maintain control in North Korea; others are less sure.43
Participants in the Six-Party Talks have also disengaged from this bad actor, only to find that
such a policy neither curbs tensions nor advances the peace process. Since economic isolation
and disengagement seemingly are not working, perhaps the better approach toward
normalization with North Korea would call for expanding the engagement to include military-
to-military talks. For 60 years, an armistice—not a peace treaty—has governed the peninsula.
Pyongyang has indicated that it wants such a treaty, one that could lessen the opportunities for
military conflict and perhaps open relations more fully with South Korea and the United States.
Without a peace treaty, North Korea will wish to protect its soil and maintain its deterrent
forces to counter its adversaries.44

Other Nations

These economic and territorial conflicts have spurred security concerns for many
countries. Militaries in the region have grown as Asia-Pacific countries attempt to protect their
developing economies and defend themselves from potential adversaries. Apprehension about
their defense and the role that the United States might play are also troubling. The rising US
national debt and Congress’s calls for defense cutbacks raise concern among allies and friends in the region. Will America be willing to continue providing that umbrella of world security to its partners? Aging hardware and infrastructure also prompt similar worries regarding the ability of the United States to meet its “commitments” worldwide. Finally, the perception of America as a nation in decline may embolden others to push the security envelope.

With those issues in the mix, accompanied by regional economic and territorial conflicts, nations in the region—especially those with evolving economies—are modernizing their militaries. For example, Vietnam has ordered combat aircraft and six Kilo-class submarines from Russia; additionally, South Korea is doubling its purchases of Aegis combat systems over the next decade and more than doubling its submarine fleet. South Korea also has a new missile agreement with the United States that extends the range of its missiles to 500 miles and increases the payload of shorter-range missiles. Indonesia is buying coastal radar systems and submarines from South Korea. Japan appears to be drawing even closer to the United States, but at the same time it is improving its own military capabilities. Having elevated its military spending, that nation is in the process of strengthening ties to Indonesia, Thailand, and Vietnam. Japan is adjusting its Self-Defense Forces to become more responsive and capable of projecting power. Further, it is considering a revision of the security alliance with the United States regarding the contested islands. Finally, Japan is expanding its military defenses by agreeing to install a second X-band radar in the southern part of the country. Even Singapore is purchasing additional weapons. Many nations in the region are acquiring dual-use technologies, submarines, and advanced missiles, keeping a concerned eye on Chinese
expansion. To offset Beijing’s rise, the United States has received invitations to participate in many regional venues.

United States

America remains the unmatched global military power. Regional turmoil—spurred by economic issues, steered by the alignment of nations and current US commitments, and facilitated by growth in regional military capabilities—ensures that the United States must maintain a significant military capability to respond. Further, in light of the fact that Russia, China, North Korea, Pakistan, and India hold nuclear capabilities and that the ability of two or more of those nations to secure their nuclear assets is in question, the ample deterrent umbrella provided by the United States for its allies in the region must remain in effect.

In the last two years, America has shifted its attention to Asia, reinvigorated the US-Philippines military agreement, reopened military contacts with Vietnam, stepped up dialogue with India, sold fighters to Taiwan, negotiated extended access with Kyrgyzstan for use of the airport in Manas, and opened discussions with Uzbekistan and Burma (Myanmar). Each of these actions might give pause to both the Chinese government and the Russian Federation. In 2012 Secretary Clinton and Secretary of Defense Leon Panetta visited China, assuring its government that the United States is not attempting to contain China but to engage it and expand its role in the region in a manner beneficial to both countries. The secretaries assured the Chinese that the missile defense system agreement with Japan concerns North Korea and its missile arsenals; they used a similar approach with Russia vis-à-vis Iran.

Whereas the United States is cutting back military budgets and end strength, China is expected to continue double-digit increases in its military budget—up at least 11 percent in
2012 to an estimated $106–150 billion, still one-fourth of what the United States spends on defense. China is expanding its force projection and antiaccess/area-denial (A2/AD) capabilities with anticarrier missiles, stealth, antisatellite systems, submarines, and naval carriers. Yet, China is years, if not decades, behind in capacity and capability. Even as US systems age, America still holds a substantial edge over any challenger—except in cyberspace.

To counteract the aligning of North Korea, China, and Russia and the influence wielded by this triumvirate in the region, the United States, in concert with partners there, must examine its response—specifically, to support US national interests and those of its partners, particularly the economy, energy security, deterrence, freedom of action across lines of communications (LOC), and regional stability. Certainly, all of these are important, but regional stability helps promote each one. The economy and energy are significant drivers. The nuclear umbrella offered by the United States curtailed proliferation for many years. Moreover, freedom of action across all LOCs—sea, space, cyber, and air—is a significant issue in the region, but its application to space and cyberspace is of especial concern.

The Air Force’s Role in the Asia-Pacific Region

Having provided a backdrop to the worst case, we now consider the challenge of determining how the United States should prepare for this uncertainty and what specific role it should play in attaining national strategic objectives. Any strategy that includes the Air Force begins with the broad concepts established by law, reflected in the national security documents—the National Security Strategy (NSS), the National Defense Strategy (NDS), and the National Military Strategy (NMS)—that eventually drive the creation of war plans. These broad documents lead toward the desired ends as established by the nation’s leadership,
identifying a whole-of-government (whole-of-nation) approach that includes the Services, agencies, and regional partners. Employing this “ends-ways-means” approach ensures that the Air Force provides the necessary ways and means to create the effects needed to support the conditions to meet those objectives in the Asia-Pacific region. The Air Force does not have a stand-alone strategy; instead, it supports the needs of the nation.

US National Interests

The raison d’être for the military in general and the Air Force specifically is to serve and support the needs of the nation. The President codified those needs in the NSS in 2010, and while that document differs from other strategies that preceded it, much of the essence remains the same. The broad national interests reflected in the NSS are as follows:

- Security: The security of the United States as well as its citizens, allies, and partners.
- Prosperity: A strong, innovative, and growing US economy in an open international economic system that promotes opportunity and prosperity.
- Values: Respect for universal values at home and around the world.
- International Order: An international order advanced by US leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges.51

The NSS is a diplomatic or political document designed to inform the nation, other nations, and the military. It places significant emphasis on soft power backed by America as the “global security underwriter,” both economically and militarily. Although the nation will be the guarantor, it expects to share the burden with larger entities and individual countries that shoulder their part of the responsibilities. The NSS includes expanding partnerships with
historical allies like Australia, nurturing partnerships with others such as India and Indonesia, and supporting regional alliances such as ASEAN. These allies and partners enhance the nation’s resilient forward posture and facilities and could expand forward deterrence with capabilities such as missile defense. Further emphasis on soft power includes garnering cooperation with China and Russia.

These four broad themes then direct the guidance established in the NDS, the *Quadrennial Defense Review Report*, and the NMS, which sets the ends or objectives for the military. According to the 2012 NDS, which contains the blueprint for the joint force in 2020, the objectives include the following:

- Counter Terrorism and Irregular Warfare
- Deter and Defeat Aggression
- Project Power in Areas Where US Access and Freedom to Operate Are Challenged
- Counter Weapons of Mass Destruction
- Operate Effectively in Cyberspace and Space
- Maintain a Safe, Secure, and Effective Nuclear Deterrent
- Defend the Homeland and Provide Support to Civil Authorities
- Provide a Stabilizing Presence
- Conduct Stability and Counterinsurgency Operations
- Conduct Humanitarian, Disaster Relief, and Other Operations

Based upon these 10 objectives, the worst-case path’s strategy of Peace through Projected Strength and Engagement leads to regional and economic stability as a desired end state for the Asia-Pacific.
As reflected by the objectives above, the “rebalance” to the Asia-Pacific theater mentioned in the NDS includes thwarting adversarial attempts at regional control (specifically regarding China). It also discusses collaboration with other nations in the region to expand trade and secure access to LOCs with traditional allies such as Australia, Japan, and South Korea as well as expanding to other Indo-Pacific nations such as Myanmar and India, where the nation is “investing in a long-term strategic partnership.”

In light of current fiscal realities, the new guidance is not a call to do less with less but a “different mix of future challenges with a distinctly different mix and application of capabilities.” This guidance underscores the need in a fiscally constrained environment for “innovative, low-cost, and small-footprint” approaches. It assumes a greater risk to accomplish simultaneous missions. As in the NSS, this strategic guidance places greater reliance on burden sharing by leveraging allies and partners to meet regional needs. Of course this raises the question, Will the allies and partners have the capacity, capability, and will to supply those gaps to fill our risks?

Evidence from Europe indicates that they do not. Sixteen months after Secretary Gates’s speech on European nations pulling their fair share in NATO and taking on spending to maintain their national defense, their defense budgets declined, personnel decreased, equipment went into mothballs, and orders for new equipment terminated or restructured. Since 2008 France’s military budget has fallen 4 percent; Germany’s, 1.4 percent, and the United Kingdom’s, less than 1 percent, with more cuts planned for the coming years. In the Asia-Pacific, “military spending rose by 2.4 per cent, due mostly to a 6.7 percent ($8.2 billion) increase by China. India’s military budget fell by 3.9 percent or $1.9 billion in real terms, with high inflation
cancelling out a nominal increase.\textsuperscript{57} Russia increased its spending by more than 9 percent in 2011 and is expected to raise that figure to 59 percent by 2015.\textsuperscript{58} It appears that the only countries raising their defense budgets are those that the nation might consider threats. From the 10 objectives contained in the NDS, the combatant commanders and the Services begin their respective planning and preparation processes, the theater commanders concentrating on the war-fighting aspect and the Services on the “organize, train, and equip” functions to show the “how” or the ways they will meet the objectives.

**Air Force Roles—Enduring Purposes**

The Air Force’s role, purposes, and functions support the security needs of the nation. As with the national security documents, the Air Force’s strategy for the Asia-Pacific region should be guided by its governing directives and by the unique characteristics airpower possesses. Although we believe that strategy should come first, we must acknowledge another consideration. That is, the strategy must also be guided by realistically available resources—forces and funding. First, the Air Force receives its direction from law, and according to Department of Defense Directive 5100.01, *Functions of the Department of Defense and Its Major Components*,

the Air Force is the Nation’s principal air and space force, and is responsible for the preparation of forces necessary for the effective prosecution of war. The Department of the Air Force shall organize, train, equip, and provide air, space, and cyberspace forces for the conduct of prompt and sustained combat operations, military engagement, and security cooperation in defense of the Nation, and to support the other Military Services and joint forces. The Air Force
will provide the Nation with global vigilance, global reach, and global power in the form of in-place, forward-based, and expeditionary forces possessing the capacity to deter aggression and violence by state, non-state, and individual actors to prevent conflict, and, should deterrence fail, prosecute the full range of military operations in support of U.S. national interests.\(^{59}\) (emphasis added)

The Department of Defense (DOD) has the task of organizing, training, equipping (recruiting, maintaining, etc.) its forces. The nature of those forces may be driven by the combatant commanders as they conduct their war-fighting planning functions. Generally speaking, however, the Services are the experts in their respective domains and in the art of the possible.

The second guiding factor is the unique characteristics inherent in airpower. As a strategic service, the Air Force achieves Global Reach, Global Power, and Global Vigilance through airpower’s fundamental elements—speed, range, flexibility, precision, and lethality.\(^{60}\) More recently, these elements now include persistence and stealth.\(^{61}\) The Air Force blends these fundamental elements to bring effects quickly, globally, timely, accurately, and with measured power.

The Air Force has been assigned the responsibility of providing not only air-minded options for the control of air, space, and cyberspace but also the roles of precision strike and rapid mobility, together with airborne and spaceborne intelligence, surveillance, and reconnaissance (ISR). The role of building influence has been added as well, based upon the NSS’s emphasis on sharing global burdens and a need for partnering. One finds some of these same air-minded concepts in the Air Force’s 12 core functions:
• Nuclear Deterrence Operations
• Air Superiority
• Space Superiority
• Cyberspace Superiority
• Command and Control
• Global Integrated ISR
• Global Precision Attack
• Special Operations
• Rapid Global Mobility
• Personnel Recovery
• Agile Combat Support
• Building Partnerships

What Do We Have?

This study looks less than a decade into the future, a fairly short time horizon that is especially brief when one considers forces and funding—the realistically available resources mentioned earlier as a third consideration. Given the expected stagnant-to-decreasing military budget over the Future Years Defense Program (plus two for this study), the opportunity to increase personnel and recapitalize equipment or acquire new systems remains unlikely. Even if it were not a remote possibility, realistically acquiring new weapon systems takes 15 years or more. Consequently, unless the Air Force has been working a new system for 10 years, we will probably not see the fruit of that effort until this study’s time frame has lapsed. To say that the United States might well have the Air Force of 2020 in place right now is likely no
exaggeration. As former secretary of defense Donald Rumsfeld opined, “You go to war with the army you have, not the army you might want or wish to have at a later time.” Because the Air Force has experienced false starts with systems and delays in others, it may already be too late for the service to provide new systems or platforms for the DOD strategy to 2020. In effect, the Air Force of 2020 will not differ significantly from the one of today. Table 3.1 depicts both the numbers for 2011 and those for expected aircraft in 2020.

Table 3.1. Air Force resources

<table>
<thead>
<tr>
<th>As of Sep 2011</th>
<th>AF Military Personnel</th>
<th>Civilian Personnel</th>
<th>Ready Reserve</th>
<th>Total AF Personnel</th>
<th>AF Budget Auth (TOA)</th>
<th>Major US Bases</th>
<th>Major Foreign Bases</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>332,800</td>
<td>185,974</td>
<td>178,100</td>
<td>696,874</td>
<td>162,520,000,000</td>
<td>70</td>
<td>13</td>
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<td>Bombers</td>
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<td>Tankers</td>
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<td>Fighters</td>
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<td>ISR/BM/C3</td>
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<td>Total AF Aircraft</td>
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<td>ICBMs</td>
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<tr>
<td>Satellites</td>
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<tr>
<td>162/162</td>
<td>508/476</td>
<td>2,026/1,833</td>
<td>473/732</td>
<td>823/793</td>
<td>5,484/5,502</td>
<td>450</td>
<td>63</td>
</tr>
</tbody>
</table>


No other air force in the world can match the US Air Force, and few have challenged it since 1990. Coupled with the best training for its pilots, maintenance crews, and other logistical support, the speed, stealth, precision, and range of the service make it a formidable force. One could go so far as to state that the Air Force is a deterrent force. Yet, considering the looming budget issues and calls to curb spending and cut programs, the figures in table 3.1 may be very close to the truth for 2020 since the trend line on personnel and most platforms remains on a downward slope and aircraft age and support costs are projected to rise. Hiding behind those numbers is more telling of the story.
**Personnel.** Total personnel numbers have continued to drop and are expected to slide even further in 2013, in keeping with the DOD’s requirement to become a “smaller and leaner—but agile, flexible, ready, and technologically advanced force.”\(^{66}\) It is safe to say that the “smaller and leaner” portion of that statement depends heavily upon the technology portion. Continued focus on the balancing of reserve component and active duty forces as well as the mix of civilians and contractors will be important as the Air Force attempts to keep its core missions on sound footing in light of fiscal austerity. But keeping those core missions solvent undoubtedly will require some trade-offs between programs and people.

Reductions in force, affecting either the military or civilian rosters, take their toll. It takes time to produce subject-matter experts, highly qualified operators, and skilled tradesmen, as acquisition and other fields have discovered. In addition, the synergistic effects of reduced expertise, accompanied by aged systems and equipment, will likely extend the time necessary to repair our aircraft. Further, on the civilian side, a considerable number of these seasoned professionals are approaching the retirement gate. The questions are, How much more will each decline over the next eight years, and will too few people, insufficient logistics support, or antiquated platforms result in a hollow force?

**Basing.** This new chapter, as the Air Force Posture Statement calls it, will depend heavily on a lower-cost, lighter-footprint Air Force—this is especially true, given the greater focus on the Asia-Pacific region and not forgetting about other regions or other national security challenges.\(^{67}\) America’s large-footprint bases can exert domestic pressures on host nations and present regional issues for their governments.\(^{68}\) Decreasing the number of the Air Force’s fixed overseas bases and reducing its footprint will give the service a flexible force that maintains
maximum freedom of action.\textsuperscript{69} The goal is to have the minimum expeditionary combat-support force and increase the velocity of support forward in order to reduce the footprint.\textsuperscript{70}

As the nation rebalances its forces and focus, it will need to reexamine basing with an eye toward Global Reach, power projection, and engagement. The decline in overseas presence, not to mention the one in congressional districts with Air Force installations, poses challenges for the Air Force. Despite the problems associated with overseas basing (e.g., host nation political issues and cost), it affords the nation a launching platform in a crisis event. The balance between overseas bases and those in the continental United States (CONUS), as well as potential realignment of those bases, will be important in the coming decade. Basing issues should not present an “us or them” dilemma for a host nation. Other host nation considerations are also noteworthy. For example, as large as China’s trade is with America, its Pacific trade with Japan, Taiwan, and South Korea is even greater, potentially creating future conflicts of interest and concerns about basing access in the Pacific region.

Certainly, permanent presence brings advantages such as immediate availability of war-fighting resources, a location from which to launch operations, expanding military capabilities and sortie rates, and perhaps a heightened level of commitment. It also allows for opportunities to train and operate with other militaries, enhancing interoperability and establishing personal relationships. Rotational bases, used on a less-permanent scale, have these same advantages and, at least for the host country, may carry less baggage regarding the “foreign occupier” mentality. However, many years of experience indicate that having a permanent or rotational base does not mean that the United States will be able to use it for kinetic operations. Host countries place restrictions on use of their sovereign territory; thus,
relying on foreign bases is fraught with the risk of limited or denied use. Such is not the case with basing on US territory.

The main operating (or forward operating) base in Guam will remain a tremendous asset during this period because it will support Air Force power projection into the western Pacific region (fig. 3.1). However, Joint Region Marianas (Navy Base Guam and Andersen AFB) cannot hold all of the assets required for major operations in the region. Other facilities, such as the base at Kadena with long-term ally Japan, will provide additional operating effects. However, in light of current discussions, the US agreement with Japan will probably change the basing structure at Kadena over time. Anticipating reductions in other locations, such as the 60-year occupation of Korea, the Air Force should strongly consider alternative locations in the western Pacific, preferably former US outposts or protectorates like the Philippines or the Marianas, to avoid some of the forward-basing issues of access. One of the great concerns with the Asia-Pacific is the A2/AD capabilities resident in the region. To mitigate that capability, the United States must either find locations well inside the adversary’s threat ring or rely more on long-range assets.
Figure 3.1. 1,500 nautical mile distances from potential Asia-Pacific operating locations

Studies on capacity and distance should receive consideration during basing selection. Certainly, our basing choice should account for the probability of major disasters, including typhoons, earthquakes, floods and tsunamis; however, proximity to China, the Strait of Malacca, and the region’s oil resources is also desirable. Securing forward-support locations along the rim of India or Southeast Asia places the United States in a strategic shipping and economic location. Complicating the adversary’s strategy by spreading the threat (and the risk) across multiple bases also has a wisdom of its own. Nonetheless, we must consider the sunk costs associated with infrastructure and personnel. Although not necessarily in the Asia-Pacific as most might think about it, various locations currently in use in Central Asia afford the United States opportunities for partnership building or bases for offensive operations against Russia, China, or other potential adversaries. Giving consideration to leasing some of the bases from Operations Enduring Freedom and Iraqi Freedom in “warm status” is worthwhile. The distances
to strategic targets in some cases may be less from these locations than from positions along the Second Island chain (fig. 3.2).

Figure 3.2. 1,500 nautical mile distances in the Indo-Asia-Pacific

Regardless of where the Air Force might base in the region, it needs to address infrastructure and logistics. Our adversaries are not opposed to attacking the logistics, transportation, and support functions both in forward areas and rear areas. They know that our high-tech systems demand complex logistics support to sustain them and that attacking those logistics nodes will cripple US war efforts. The bases will need hardening against attack from kinetic and cyber weapons, especially at critical nodes for operations. The Indo-Pacific region must have collocated operating bases or forward operating bases from which to launch, support, and sustain forces. Depending on the austerity of the forward operating location, ramp space, lodging, fuels, facilities, and air traffic control are potential issues. Stocking of certain
equipment items and spares may require pre-positioning some materiel or relying upon reachback. If the Air Force cannot access critical parts over the long distances in this theater, then we will not be able to sustain the force well. The Air Force’s selection of a location to base its forces may also hinge on our systems, platforms, weapons, and technology.

**Satellites.** Reliability on space—communications, navigation, and timing—for commerce and defense is unquestioned; furthermore, the potential weaponization of space will make this reliance even more important. Concerns over space programs and intentions in space have intensified as more countries have acquired capabilities. Dependence on space assets has increased, as has the number of satellites. From the ever-critical Global Positioning System (GPS) constellation of 30 satellites, missile early warning via the space-based infrared system, space situational awareness, weather, communications, and intelligence assets, these resources are one of two linchpins to the Air Force’s war-fighting prowess. Unfortunately, these resources are not quick-turn platforms, either in development or in launching into orbit; rapid beddown in space is still a myth. Other nations have increased their “domestic” launches, and the United States relies on them for some of its space capacity. America has signed agreements with several allies and partners, such as Australia, Canada, and New Zealand, to share space assets and information.73

Further, both China and the United States have demonstrated antisatellite capabilities that stress space assets’ vulnerability to attack. Directed-energy and laser systems pose a significant threat to these assets. Antisatellite shoot-downs produce debris fields as a second-order effect. Such hazardous environments currently affect the United States more than other nations due to our reliance on space access.
To meet the space challenge, America must find a way to replace its vulnerable satellites rapidly. The *National Security Space Launch Report* concluded that the nation can meet lift needs to space through 2020, but one wonders what lies beyond.\(^{74}\) Has the increased use of commercial firms and partnerships with other nations to launch US payloads had an adverse effect on homegrown expertise? Additionally, in light of the fact that other nations are building their own GPS-like constellations (e.g., China’s system, scheduled for completion before 2020), one wonders about their intentions and whether the United States will become more reliant on others for its space needs.

**Intercontinental Ballistic Missiles.** Nuclear weapons are the most destructive in the world; therefore, for this theater in particular, nuclear deterrence is the most important capability provided by the Air Force. Although the probability of nuclear conflict may seem remote today, there is no guarantee that it will not increase in the future. Indeed, the expectation that the number of nuclear-weapons states will rise by 2020 adds to the likelihood. The presence of six nuclear-capable countries in the region, two of them not very stable, and others that desire to possess that capability lends significance to the United States’ umbrella of extended deterrence for countries in the region as a means of preventing confrontations and reducing the proliferation of nuclear technologies.

The nation must always keep in mind the risk of a miscalculation by nuclear-capable countries in the region as it examines strategies for the Asia-Pacific. Escalation of conflicts needs to be factored into the strategies for the region. Although one hopes never to resort to nuclear weapons, the presence of that option gives tremendous incentive to avoid conflict altogether. However, if friends and foes believe that the US extended umbrella is failing or if
they question America’s resolve to use it, then foes may exploit the opportunity to exert influence over the region. Friends may also change their decision calculus regarding alignments in the region or pursue their own nuclear programs. Each of these may run contrary to the desires of the United States.

Some suggest that America should reduce the numbers of nuclear warheads in the inventory. Although that argument sounds plausible, the realities of the situation remain—specifically, foes in the Asia-Pacific are not decreasing their numbers but wish to add to an existing arsenal or develop a capability. As the number of American nuclear weapons decreases, more countries are coming closer to parity with the United States. The possibility of other nations entering the nuclear club or of those that possess them currently adding to their number of weapons may stretch the need for nuclear capability. To counter that possibility, the Air Force must maintain a credible and survivable nuclear-delivery capability. Nuclear weapons offer the great advantage of deterrent capability, and without any acquisition activities in progress to replace the warheads and delivery platforms, we should not lightly consider reductions in either our capability or capacity.75

The ICBM force, one leg of the triad, includes aged keepers of the peace nearing the end of their service life unless we make significant investment in the system as a whole. The last Minuteman III entered service in 1978, and with major life-extension programs, we expect the 450 Minuteman IIIs to remain viable beyond 2020. According to Lieutenant General James Kowalski, commander of Air Force Global Strike Command, Congress has mandated viability beyond 2030.76 The number of ICBMs has remained stable for the last few years, but cost, diplomatic decisions, and future viability keep the ICBM force in play for cuts. Regarding ICBMs
and the other two legs of the triad, some invariably raise the question of how many nuclear-deterrence forces the nation needs to meet a strategic-deterrent force structure and comply with the New START. That treaty calls for no more than 1,550 nuclear warheads, 700 deployed launchers, and 800 total launchers by 2018. Further reductions are under consideration.

**Aircraft.** The terms “war-worn” and “timeworn” best describe Air Force aircraft. The inventory does include some newer models, but many of the heavy war-fighting or support aircraft are long in the tooth. Age and use have combined to produce lower reliability rates, fostering a need to generate, for example, 12 airframes to fly six. For many of these timeworn systems, updates to onboard technologies have extended their usefulness, and continual service life extension programs have bought them additional years—but at a cost.

**Bombers.** Bombers serve multiple roles, both conventional and nuclear, in defense of the nation. The second Air Force leg of the triad includes 20 B-2 and 76 B-52H nuclear-capable aircraft. Regardless of concerns about the survivability and penetrability of these aircraft, discussed below, they will provide a deterrent force through 2020.

The last B-52H entered service in 1962; thus, the average fleet age is 50 years—a significant fact. More amazingly, the Air Force expects the H model to remain in the inventory until 2040. Although it is still very capable as a result of many upgrades to its avionics and offensive and defensive capabilities as well as modifications to the missions it performs, this nonstealth, relatively slow bomber remains vulnerable to A2/AD threats in the Asia-Pacific. The nonnuclear B-1, though half the age and faster than the B-52H, also suffers from age-related difficulties. The Air Force has recommended nearly $250 million (at a minimum) for planned sustainment and modernization measures for the B-1, intending to keep the 63 platforms in
service to 2040.\textsuperscript{78} However, B-52Hs and B-1s can neither penetrate and persist in high-threat A2/AD environments nor strike relocatable targets, placing them at risk in a conflict.\textsuperscript{79}

Even the low-observable B-2 is no longer a young system. By 2020 this aircraft will have an average age of nearly 30 years. The 1980s-era stealth technologies used in the B-2 will become stretched as the aircraft meets adversaries and their technologies in 2020.\textsuperscript{80} According to some, by 2018 a B-2 without upgrades will no longer have the advantage of stealth, losing its ability as a penetrator to attack targets in an A2/AD environment.\textsuperscript{81} Because only 20 stealth bombers operate at long distances in antiaccess environments, sortie production will remain low; however, until another long-range-strike platform comes online, the B-2 offers the best option to hold targets at risk for this theater. Despite considerable talk regarding a follow-on long-range-strike family of systems, this capability most likely will not emerge by the 2020 time frame.

\textit{Fighters.} Even though some of the newest aircraft in the inventory reside in the fighter community, this force is also well worn. The Air Force plans to keep its F-15s, currently 20–25 years old, in service to 2025 with active electronically scanned array upgrades, assuming favorable results from the fatigue study. Service life extension programs on structure and a programmed avionics extension are scheduled to keep the 22-year-old F-16 going strong, but the 30-year-old A-10s are scheduled for retirement. The five-year-old F-22, boasting stealth and supercruise, is the unmatched fifth-generation strike fighter. Its advanced capabilities will allow it to penetrate the anticipated A2/AD environment in the Asia-Pacific. Of concern, however, are the small numbers of this very capable aircraft, which, along with the long distances in the Asia-Pacific, may limit sortie production. Once fielded, the F-35 will also be a most capable system,
sporting stealth, advanced avionics, and sensors. The phrase “once fielded” is key, insofar as the program has suffered multiple delays and breaches in its acquisition program, which is crucial not only for the United States but also for our allies. Providing a smaller footprint and needing less infrastructure, and sustainment material, the F-35 will be interoperable with our allies’ aircraft.

Unfortunately for the fighter-heavy Air Force, aircraft with longer ranges will play the larger role in the Asia-Pacific—at least initially. However, to operate in this theater, the Air Force, the other Services, and allies will likely be mated with 50-year-old KC-135 and 27-year-old KC-10 tankers.

**Tankers.** According to General T. Michael Moseley, former Chief of Staff, “The single point of failure for an air bridge, the single point of failure for global ISR, and the single point of failure for global strike is the tanker. And this is not just an Air Force issue—it is a joint and coalition force issue as well.” Without Air Force air refueling, much of the Global Reach and Strike capability does not exist. These aging KC-135s are slated to remain in service until 2040, when they will be 80 years old. The younger and more capable KC-10 is expected to remain in service until 2045, but both airframes are becoming more costly to maintain. In 2009 General Arthur Lichte noted that maintenance may need seven hours for every hour the KC-135 is in flight. He also observed that by 2020, the cost to maintain those airframes will be upwards of $6 billion, and as it approaches its 2040 date, $17.8 billion. Much of this expense is tied to fuselage skin and wiring checks as well as corrosion issues.

Even with those limitations, we do not have enough tanker aircraft to meet requirements. The *Report on Aerial Refueling Requirements* concluded that 500–600 KC-135
equivalents would meet worldwide air-refueling needs (for 2005). Including the 59 KC-10s in the calculations, the Air Force still fell short of that number. In 2012, under a planning scenario in the Mobility Capabilities and Requirements Study 2016 (MCRS), a lesser tanker inventory of 474 (415 KC-135s and 59 KC-10s) and 79 Marine Corps KC-130s did not satisfy peak demand in two of the three scenarios—in one case exceeding the requirement by 20 percent. The explanation is that a modernized fleet would need fewer aircraft to meet the same demand (because they require less depot time and have greater capability). Complicating the matter further, the KC-46—once fielded—is not a one-to-one swap with the tankers it replaces. Yet, as the Air Force plans for the uncertain future, it should ask itself whether a weapon system so critical that it is a single point of failure for deployment and employment is worth the risk.

**ISR platforms.** ISR missions, one of the few expected to expand, may have done so even more rapidly if cost overruns due primarily to immature technologies and increases in the delivered number of platforms had not created acquisition problems. Nonetheless, the desire for more ISR persists, boosting the stated requirement from 50 continuous orbits a few years ago to 65 and eventually extending to 85. Besides the very capable MC-12 and U-2, a large percentage of air-breathing reconnaissance assets are of the remotely piloted variety, and that trend is expected to continue. Providing valuable intercepted data to intelligence centers, local commanders, and troops in the field are the MQ-1 Predator, having a range of 770 miles and flying at a maximum altitude of 25,000 feet for over 40 hours; the follow-on MQ-9 Reaper, with a range of more than 3,600 miles, flying at 50,000 feet for over 27 hours; and the Global Hawk, having a range of 10,000 miles, flying at 60,000 feet for 32 hours. One can fuse the data gathered by these platforms with information from other sources to offer a better intelligence
assessment. Cancellation of the Global Hawk Block 30 aside, these assets give combatant commanders the desired field picture. Unfortunately, we lack not only airframes but also analysts to turn the data into intelligence.89

*Transport aircraft—strategic lift.* Air Force airlift has provided the necessary payload and strategic reach to execute actions supporting major combat operations and humanitarian missions. The capacity and reach of strategic airlift platforms have been more than adequate to create and sustain effects throughout disparate theaters, but the airframes are wearing out. The 18-pallet-position C-17 continues to perform well at an operations tempo much greater than planned. Although the C-17 is much newer than the C-5, the Air Force will have to replace it sooner than expected because of heavy usage. The 30-year-old C-5s with their 36 pallet positions are scheduled for the Reliability Enhancement and Reengining Program but will not be available until 2016 at the earliest. Even then, less than half of the C-5 fleet will receive the upgrade, leaving sustainment costs to the aircraft at a high level.

Even as they age, these essential mobility platforms are meeting the stated requirement for lift. The *MCRS* determined that the peak demand for strategic lift occurs during the deployment phase of a major war, and for the cases used in the study, the DOD’s capacity exceeds the peak demand in each of them. The 223 C-17s and 111 C-5s yield 35.9 million ton-miles per day (MTM/D) against a modeled strategic airlift demand of 32.7 MTM/D.90 Interestingly, the earlier requirement applied to a strategic lift capacity of 33.95 MTM/D, which, according to the Joint Requirements Oversight Council, would not be met. General Duncan McNabb’s testimony before the Senate Armed Services Committee on 13 July 2011 pointed out that the current “222 C-17s, 52 C-5Ms, and 27 C-5As are far more modern and capable than any
strategic airlift fleet in our history,” providing 32.7 MTM/D capacity with only 300 aircraft—much greater than the 350 aircraft and 26 MTM/D of 1999. After release of the Defense Guidance in January 2012, the Air Force recommended retiring 27 of the 52 C-5s, leading one to assume that without those aircraft, the nation could still meet the required capacity.

**Transport aircraft—theater lift.** Peak demand for theater lift occurs once the forces have been deployed and surge airdrop/airland operations begin. This allows the C-17s to perform theater duties alongside the C-130 as well as respond to strategic missions. According to the MCRS, the 401 C-130s exceed the peak requirement of 335 aircraft for the most demanding scenario. However, the study also noted that “based on current total force planning objectives, the C-130 crew force structure cannot sustain steady state operations in combination with a long duration irregular warfare campaign.” Dispersed operations planned for the Asia-Pacific as well as the distances in that theater may make it difficult to find suitable airfields near war fighters.

**Building influence.** As discussed earlier, the Air Force has been assigned several roles, and emphasis on sharing global burdens and partnering has led to the addition of building partnerships to the service’s core functions. In view of declining resources, both budgetary and forces, building partnerships based on mutual benefit reflects smart defense. The establishment of US influence in the Asia-Pacific region is akin to both basing and access. One builds influence through military engagement, security cooperation activities, and foreign humanitarian assistance as the nation interacts not only with military forces but also with government at various levels—and with businesses and the populace. Working partnerships ensure interoperability and integration of military forces, thus benefiting regional security. They
may also reduce the need for the United States to respond to crises. However, as we have observed in operations such as Libya, reliance on support is not always a wise decision, nor is European “smart defense” necessarily compatible with our needs.94

The number of negotiated international agreements is growing. Of particular note is the promise of the economic trilateral agreement among China, Japan, and South Korea, signed in May 2012. Although this agreement focuses on economic and financial relationships among these three economic powerhouses, it shows pragmatism in its stance that some old historical issues, such as the Japan’s 35-year occupation of Korea can be muted in order to benefit all parties involved. This type of accord, as well as the bilateral agreements of each of these nations with ASEAN, may lead to further easement of territorial disputes in the East Asia region. Other agreements, such as that with India, Japan, and the United States and that with China, India, and the United States, reflect additional opportunities for growth in the region.95

Trilateral accords with Japan, South Korea, and the United States and with Australia, Japan, and the United States also prove useful since interoperability exists among those nations.

One can also build influence through military exercises and military-to-military contacts. In varying levels, this is already taking place in the Asia-Pacific. Each year more than 170 bilateral, trilateral, or multilateral exercises occur, including Talisman Saber with Australia, Cobra Gold with Thailand, Keen Sword/Keen Edge with Japan, or Rim of the Pacific (RIMPAC) with more than 20 nations.96 An invitation has been extended to China to participate in the 2014 RIMPAC along with the other nations. In addition, as a way of creating ties that better uphold security, commanders at varying levels meet with their counterparts to build understanding and trust. The United States continues to meet with senior Chinese and Russian
leaders. Good military-to-military relations are crucial to establishing a favorable relationship and avoiding miscalculations that may lead to conflict.

Cyber. A final capability not included in table 3.1 deserves mention. Earlier, this chapter referred to space as one of two linchpins for the Air Force—cyber is the other. The newest domain is pervasive across all other domains and ubiquitous in day-to-day activities. Dependence on cyber networks grows not only for commerce but also for defense. The nation and the Air Force are dangerously vulnerable to cyberspace events. Cyber warfare in the financial, commercial, industrial, and military arenas grows steadily more prevalent. China continues as the most prolific cyber attacker, followed closely by Russia. Cyber espionage as well as cyber theft has escalated, and cyber security concerns from industry and banking sectors are creating diplomatic issues for all nations, including the loss of valuable data, intellectual property, critical technologies, and government and commercial trade secrets. Indeed, the Asia-Pacific region is a cyber powerhouse fueled by world-leading high-performance computers. Chinese corporations are shaping the future of next-generation networks, and if the trend continues, China will become the market driver in other sectors such as telecommunications. Eventually, the entire infrastructure and supply chain on which the Air Force’s digital force multipliers rely will be manufactured abroad, creating vulnerabilities in the physical layer of cyberspace. As of this writing, no adequate method exists for measuring or determining the success or failure of cyber activities. Yet, without cyber capabilities from the low end to the highest order of use, other military capabilities and perhaps the military itself will founder.
Attacks on the nation’s cyber-insecure industrial control systems (those that operate power, water, pipelines, military systems, medical systems, and the like) are on the rise, especially after the Stuxnet attack through the Siemens PCS7 controller.\textsuperscript{100}Espionage access to defense firms has also increased. Indeed, the cyberspace threat is pervasive. China, Russia, North Korea, and India have significant proficiency in this domain.\textsuperscript{101}Experts believe that China has the world’s premier denial-of-service capability.\textsuperscript{102}As evidenced in Estonia and Georgia, Russian capability is formidable as well. Yet, the cyber concern goes beyond nation-states. These anonymous, instantaneous, and remotely launched denial-of-service attacks are propagated by insurgents and criminal organizations alike.\textsuperscript{103}Keeping up with cyberspace will remain a challenge since countless individuals have the competence to conduct disruptive cyber operations. The Air Force’s cyberspace tools in its kill chain of weapons, platforms, and command and control need defensive protections from within and without.

**What Do We Need?**

As we plan and prepare for an uncertain future, we must once again consider realistically available resources—forces and funding. Because we expect the budget to decrease in relative terms over the time frame addressed by this study, the Air Force must either make trade-offs among systems, missions, readiness, and people or find innovative ways to carry out most of its assigned missions. To meet theater needs and attain the desired end state of regional and economic stability, the strategy must align with the nation’s priorities.

First and foremost, the NSS and NDS consider homeland defense of vital concern to the Air Force. Despite the focus on the Asia-Pacific, we must not neglect the other theaters—including North America. The Air Force must help secure the homeland and maintain its
defense capabilities to protect US citizens and the nation’s borders as well as North American allies. The nation let its guard down, believing it was secure and that confrontations would all occur “over there.” Further, the United States should not that assume all the activity will take place within the first or second island chain. Russian and Chinese influence peddling in the Western Hemisphere and many “investments” in Central and Latin America have occurred, perhaps in an attempt to upset the US balance in the region. Beyond influence peddling, we have observed more overt actions, such as a Russian submarine surfacing in the Gulf of Mexico after having been there for an undetermined number of days. Russian bombers regularly violate US airspace over Alaska. Recently, potential Chinese naval exercises near Hawaii have caused agitation. Increasing Chinese economic and military cooperation with Cuba, similar perhaps to US activities with Taiwan, should also raise the nation’s concern.104 We should expect to see more of these incursions in our uncertain future.

Second, America needs a robust, viable nuclear deterrent force, able to meet the needs of today and those of an uncertain future. US nuclear forces have the advantage over the nearest competitor but not over all of the competition. We should give strong consideration to the levels and types of weapons we wish to reduce. Further, the Air Force’s two legs of the triad need an overhaul. Trade-offs for a new long-range penetrating bomber and upgraded ICBMs deserve consideration although neither will approach operational capability by 2020.

Third, tanker aircraft—a limiting factor in the MCRS 2016 study and the single point of failure for deployment and employment of US forces—are quite vulnerable. Some adversaries may be so bold as to target the tanker in our early deployment stages to severely cripple US force projection and access to forward-deployed locations. The KC-46 must experience no more
delays. Further, although the KC-46 is more capable than the KC-135 it will replace, 179 aircraft cannot necessarily meet the same number of receivers at distant locations as 350 less-capable tankers. Additionally, to replace all the KC-135s will take nearly 30 years, so as we field the KC-46 on time, we must prepare for what comes next in our uncertain future. We should consider such alternatives as refurbishing or modifying commercial jets, contractor refueling options in the CONUS, and the possibility of remotely piloted refueling.

Fourth, the Air Force must develop a long-range-strike aircraft as a follow-on to the B-2 in both manned and remotely piloted variants. Mark Gunzinger writes that “the vast distances involved in operating in some potential theaters of operation, the growing missile threat to US forward bases, and an increasingly challenging target set will require land-based strike platforms with the capability of flying 4,000–5,000 nautical miles (nm) between aerial refuelings and persisting over target areas located in contested environments characterized by dense, modern air defense networks.”

As part of that long-range-strike package, the Air Force should focus on the effects it desires, not just platforms. Force projection may become less about the platform and more about the weapons on the platform—smaller, long-range penetrability at a fraction of platform cost. High-speed, long-range, stealthy, standoff weapons may offer an effective option to an expensive platform. The AGM-129 advanced cruise missile had a 2,000-mile range at subsonic speeds. The AGM-86 (conventional) air launched cruise missile had a range in excess of 1,500 miles at 550 miles per hour. However, according to one study, standoff weapons lack the ability to strike targets that are increasingly mobile, relocatable, time-critical, hardened, or deeply buried. Therefore, some modifications may be necessary.
Fifth, we must continue to field the F-35, an essential system not only for the United States but also for several allies. In view of the Asia-Pacific theater and the shorter legs on this aircraft, perhaps we could reexamine the planned numbers as potential trade space. Nonetheless, the F-35 is a must-have complement to the inventory for the United States, Australia, and Japan.

Sixth, we should continue and expand current building-influence measures across the region. Expanding military relations will reduce the risk of miscalculations and confrontations in the future. General Norton Schwartz acknowledged that the Air Force must integrate its capabilities in the joint and interagency realm. The former Chief of Staff stated that the Air Force needs a greater presence in building partnership capacity with other air forces around the world, beyond just fighter pilots.

Establishing influence holds great potential. Obviously, we should strengthen our strongest alliances—those with Australia, Philippines, Thailand, Japan, and South Korea—but open up the aperture, as we recently initiated with Burma. With allies that have equipment in common, we should consider extending programs such as the RC-135 Rivet Joint shared operations to other nations, sharing air frames as well as knowledge. This initiative could include C-17 and F-35 operations as well. Where practical, we should help nations like Vietnam and Malaysia develop military skills useful to operations in their region, such as humanitarian operations and search and rescue, while learning their best practices. We should conduct expanded military-to-military visits with nations, touring training facilities, defense installations, and perhaps command and control facilities. As with China, we should continue to engage with Russia in military training exchanges and exercises—especially those involving humanitarian
assistance or disaster operations—in matters along shared borders, or protection of LOCs and piracy operations. Finally, since current practices with the DPRK have not worked well, we should open military-to-military engagement with North Korea at senior-officer levels to begin the process of normalizing relations and reducing unwanted actions.

Seventh, *forward basing* in this region is critical to operations, from building partnership capacity to kinetic operations. The tyranny of distance associated with overseas basing complicates operations. Although distances for Enduring Freedom and Iraqi Freedom were significant, equally daunting are those from some of our main operating locations, such as Guam, Kadena, and Diego Garcia, and to potential adversarial locations, such as North Korea (1,800 nm from Guam, 800 nm from Kadena). Some Asian theater adversaries present distances nearly twice that of Enduring Freedom and Iraqi Freedom. Adding to the distance dimension, the expanding antiaccess capabilities of some possible adversaries—the SA-10, SA-12, and SA-20, as well as antisub, antiair, and antisurface systems—increase the risk of operating close-in to our adversary and deny the United States the opportunity to deploy to locations where short-distance aircraft require too many tankers and too much logistics support to make them effective. Long-range Global Strike with standoff munitions beyond the GBU-39/B capability of 60 nm abates antiaccess strategies. Improved munitions, as discussed in the long-range-strike recommendation, provide a risk-avoiding option with a significant degree of precision and will continue to dominate the A2/AD environment.

In addition, to meet potential challenges and afford multiaxis attack options, we should consider leasing some of the bases from Enduring Freedom and Iraqi Freedom in warm status
for exercises and building partnership activities. Doing so will also keep two potential adversaries mindful of their southern and western flanks.

Eighth, because complexity is the antithesis of new systems, we should develop simple, lower-end, lower-cost systems for our use and that of our less advanced partners—not every system needs to communicate with all other systems. Similarly, we should explore further use of remotely piloted aircraft and lighter-than-air vehicles for air-distribution needs. The Marines have remotely piloted distribution in Afghanistan—the Air Force should as well.

Ninth, cyber systems, like so many of the Air Force’s electronic mechanisms, are subject to attack or disruption. Because of the speed of potential attack, we need more automation to respond instantly to threat indications. Using machine-to-machine interface rather consulting multiple levels of human decision makers for these timely assessments makes sense. We need to implement cyber countermeasures and harden our systems.

Tenth, personnel types and numbers demand a serious look. Automation offers some relief, but it is not the sole answer to the Air Force’s manpower needs. As the number of platforms decreases in the next few years, one expects a corresponding decline in personnel as well. The question is, should it? Has automation reduced the requirement, or has it merely shifted it? Further, how many skills or missions should the Air Force pass off to civilian contractors? Or, based upon the number of contractors used in our recent conflicts, have we already exceeded that figure, giving us a false sense of what is necessary to support today’s military?

Moreover, based upon the 2012–13 battle over the roles and missions of the reserve component, one puzzles over whether the Air National Guard and Air Force Reserve are in the
same United States Air Force. Therefore, while the issue is already in motion, we should enjoin negotiations with Congress in earnest and once again address the roles and missions of the reserve component.

**Summary**

To prevent the worst case from becoming reality, the United States must reassert its leadership role in the world and, more specifically, in the region. Doing so, especially in these years of financial austerity, will require that all of the tools in our national kit work in unison. Only through the nation’s integrated strength will it be able to project power and maintain its regional position. Through its enduring capabilities of speed, range, flexibility, precision, lethality, and persistence, the Air Force affords the nation the ability to thwart aggression should it occur and deter military conflict from vast distance in a timely fashion with tremendous force.

However, to carry out that mission more effectively, the Air Force must modernize its equipment and prepare for future uncertainties. It will have to make some trade-offs in order to project power forward more effectively. Further, the Air Force will need the help of other nations to maintain regional stability. Through partnership building, the service can create conditions conducive to a more likely regional peace. Continued military-to-military engagements, education and training opportunities, military exercises, and support of regional needs during humanitarian crisis will build confidence and trust. Establishing those partnerships will assist the United States in securing temporary facilities as well, in the event conflict occurs. By fully planning for and employing these capabilities, the Air Force can provide the ways and means to meet the ends of an uncertain future.
Notes


6. For an interesting discussion of the trade and tribute system in East Asia with the focus on the historic four main countries of China, Japan, Korea, and Vietnam, see David C. Kang, *East Asia before the West* (New York: Columbia University Press, 2010).

7. Islands taken and territories annexed in various conquests over the past 100 years that remain contentious issues in the region include Takeshima/Dokdo (Japan/South Korea), Senkaku/Diaoyu Islands (Japan/China), Paracel Islands (claimed by China, Taiwan, and Vietnam), Spratly Islands (claimed by Brunei, China, Malaysia, Philippines, Taiwan, and Vietnam), Sakhalin and Kuril Islands (Russia and Japan), and Tibet border incursions (Arunachal Pradesh, Askai Chin, Jaamu, and Kashmir) between China and India.
8. One example is the taking of Korean women as sex slaves—or “comfort women,” as they were known—for Japanese soldiers, which remains an issue between the two nations. Another is the Nanking massacre or “rape of Nanking,” during which an estimated 40,000 to 300,000 Chinese were raped, murdered, and mutilated by the Japanese Imperial Army.

9. Some examples over the last few years include standoffs between China and the Philippines, North Korea’s attempted launch of a missile and shelling of islands, Russian military exercises in its Far East, China’s continued manipulation of its currency relative to the dollar, and Japan’s intentions to purchase three of the five Senkaku Islands.


12. The United States does have an agreed-upon commitment to defend Japan in the event that a dispute of this nature goes kinetic.


15. The author’s analysis, based upon the CIA’s World Factbook pages for the region—specifically, the “Economy” section and the list of export and import partners—as well as the US Census Bureau’s Foreign Trade Statistics, “Top Trading Partners” section. For the links, see https://www.cia.gov/library/publications/the-world-factbook/ and http://www.census.gov/foreign-trade/statistics/highlights/top/top1201yr.html, respectively.


29. The Collective Security Treaty Organization (CSTO) is comprised of representatives from Kyrgyzstan, Armenia, Belarus, Kazakhstan, Tajikistan, Uzbekistan, and Russia. One of the major purposes of the CSTO is to constrain US presence in Eurasia.

30. Charles Grant, Russia, China and Global Governance (London: Centre for European Reform, February 2012), 2. This is on a purchasing-power-parity basis, with China expected to have a 2030 gross domestic product near $47,440 billion and the United States at nearly $35,950 billion. See also IMF, World Economic Outlook, 2012, http://www.imf.org/external/pubs/ft/weo/2012/01/weodata/index.aspx.


37. Office of the Secretary of Defense, Military and Security Developments [China].


41. Oh and Hassig, “Military Confrontation,” 82–90.


44. Sigal, “Using the Carrot in Korea.”


54. Ibid., 3.

55. Ibid.


61. The debate about stealth as a fundamental element is ongoing.


64. According to a study by the Air Force chief scientist, “Owing to the 10 years or so that it typically takes to transition technology readiness level (TRL) 6 technologies into fielded capabilities, this means that the underlying date to which technologies must be projected is 2020. That, in turn, allows a determination of the technology investments that need to be under way today to enable these Air Force capabilities in 2030.” The study goes on to say that the time for cyber-related technology is half that time—five years. Office of the US Air Force Chief Scientist, *Technology Horizons: A Vision for Air Force Science and Technology 2010–30* (Maxwell AFB, AL: Air University Press, 2011), 7–9.


67. Ibid.


71. RAND has several studies examining throughput capacity, distance calculations, and other operational and logistics considerations involved in laying out a forward basing structure. The Center for Strategic and Budgetary Assessments, although less detailed in its analysis, also examines potential locations in its “Long Haul” series and other products.


79. Mark A. Gunzinger, Sustaining America’s Strategic Advantage in Long-Range Strike (Washington, DC: Center for Strategic and Budgetary Assessments, 2010), xi–xii.


83. Ibid.


90. DOD, “MCRS-16 Executive Summary.”


94. “Smart defense” is a term applied to the sharing of assets in the European community so that each country should not need to have an independent and complete defense package since other nations will provide assets.


97. Not only does the Asia-Pacific region lead the world in the number of Internet users, but also the countries within it lead the world on the variables in which the region could overtake the United States—in terms of cyber power—by 2020.


100. The Stuxnet malware uses the Siemens default password to log into the PCS7/WinCC database and extract process data or gain control of the targeted system. Stuxnet or similar malware was used to infect the systems controlling the high-speed centrifuges at Iranian nuclear facilities.


105. Gunzinger, Sustaining America’s Strategic Advantage, xi.

106. Ibid., xi–xii.


Chapter 4

Most Likely Case: A Strategy of Constructive Collaboration

Dr. Kevin C. Holzimmer, Jeffrey B. Hukill, and Dr. Dale L. Hayden

As mentioned in the introduction, the alternate-path methodology is not designed to predict the future; rather, it examines the different ways the US Air Force may posture itself for the future. Accordingly, this chapter uses the most likely path to explore the Asia-Pacific region, based upon the assumption that the current environment will continue without unforeseen catastrophic events that could dramatically alter the path toward the best-case or worst-case scenarios.

The most likely case that will develop by 2020 involves a region in which intense economic competition exists for natural resources and markets. Nations will attempt to avoid direct, state-on-state military action; however, some will use “shows of force” as a tool to obtain political gains, resulting in an “arms stroll” rather than the “arms race” that we saw during the Cold War. Shows of force, though, could lead to miscalculation within the region, creating situations in which state-on-state armed conflict might occur. Further, this particular path does not frame the near future as one that pits the United States against another peer competitor or coalition of states that actively work against US interests.1

Five key factors will shape the region during this time frame. Not only do they drive the currents of the future, but these factors are also characteristics that the United States must leverage if it wishes to follow the most likely path. The first major feature—the dynamic growth of the Chinese economy—has been studied and discussed as one of the most popular news topics of the first decade of the twenty-first century.2 Although economists debate the level of
growth occurring within the Chinese economy, it has grown at a staggering rate—a universally acknowledged fact that makes it is easy to forget other important economic trends in the region. According to Wayne Morrison, “China’s real GDP [gross domestic product] growth fell from 14.2% in 2007 to 9.6% in 2008 to 9.2% in 2009. In response, the Chinese government implemented a large economic stimulus package and an expansive monetary policy. These measures boosted domestic investment and consumption and helped prevent a sharp economic slowdown in China. In 2010, China’s real GDP grew by 10.4%, and in 2011 it rose by 9.2%. During the first quarter of 2012, real GDP growth was 8.1% on a year-on-year basis.”

Second, the economies of the leading states of the Asia-Pacific region have become increasingly integrated, a trend that will continue over the next 10 years. Brooks B. Robinson, the economic adviser to US Pacific Command, notes that, “based on statistical analysis alone, the top five Asian economies are likely to reflect a significant degree of EI [economic integration] as they proceed through the current decade.” These nations—Australia, China, India, Japan, and South Korea—have merged into a large, highly integrated trading block that dominates the regional economy. In 2010, for instance, more than 20 percent of Australia’s, Japan’s, and South Korea’s bilateral trade occurred with China. Using data from the Bureau of Economic Analysis, Robinson concludes that by 2020 the percentage rate will exceed 30 percent.

Third, many experts have written that China’s dramatic economic rise will eclipse the US economy, transforming the Middle Kingdom into the leading power in the Asia-Pacific region and perhaps the world. Some use the rise and fall of gross national product as a measure while others, such as prominent international relations scholar John J. Mearsheimer, tie together
population size and economic power. Mearsheimer concludes that population size rules out many nations: “States with small populations cannot be great powers.” Wealth is important because a “state cannot build a powerful military if it does not have the money and technology to equip, train, and continually modernize its fighting forces.”

Economists generally agree that the Chinese GDP will surpass that of the United States sometime within the next decade. In November 2012, the Organisation for Economic Co-operation and Development published a study of global, long-term growth prospects concluding that China’s GDP will pull ahead of the United States’ around 2016 and become 1.5 times larger by 2030.

Looking at GDP as the single factor depicting that Chinese power will surpass that of the United States may be problematic, though, insofar as GDP may not be the best single measure of power, whether economic, political, or military. According to the World Bank, for example, Mexico (no. 14) ranked higher than Sweden (no. 21) in GDP for the year 2011. Despite their respective rankings, Sweden’s standard of living is generally recognized as significantly higher than that of Mexico. Thus, any single factor may prove too simplistic to portray reality accurately. Michael Beckley bluntly concluded that “the key point is that national power is multifaceted and cannot be measured with a single or a handful of metrics.” Although the Chinese GDP may be poised to surpass that of the United States within this decade, America will remain well ahead on most indicators related to living standards and quality of life. However, China’s surging economic clout may motivate the country to accelerate its challenging of the United States on a number of fronts, including diplomacy and military matters.
How might China translate its growing economy into military power? Perhaps through power projection. In November 2012, China launched its first capital ship, the Liaoning. Only a few months after the Liaoning’s launch, Song Xue, deputy chief of staff of the Chinese navy, announced that “China will have more than one aircraft carrier. . . . We hope the next aircraft carrier can be bigger, because then it would be able to carry more aircraft and be more powerful.”9 As Brigadier General John Frewen of the Australian Army recognized, “For the Chinese people, carriers will be the jewels in the crown of a powerful navy, one befitting China’s rising great nation status.”10 Not surprisingly, many nations—mainly, those near China—are concerned about the Liaoning’s launch and sea trials.11

Making the ship combat capable introduces an entirely different set of problems and issues. China has yet to develop the experience to handle the complex skill sets needed to utilize the approximately 50 fixed- and rotary-wing aircraft planned for the carrier. Moreover, China currently lacks a vital aspect of surface warfare: force-protection ships. The complex integration of surface vessels with aviation assets creates the formidable force of a US Navy carrier task force. China likely will master the skills necessary to fully leverage the capabilities of its new weapon platform, but doing so will take years—some believe, decades.

Other nations in the region are not ignoring the increase in Chinese military capabilities. As an example of the arms stroll, mentioned earlier, several countries are improving their power-projection capabilities. Japan already possesses two force-projection ships and is in the process of building a new generation of them. According to Thomas Withington, “Australia is moving forward with the wholesale rejuvenation of its force-projection fleet,” launching the
first of a new class in 2011. The Republic of Korea is in the midst of building four such ships—among the fastest of their class in the world.¹²

Fourth, the integrated economy has created a sense of regionalism among the states of the Asia-Pacific but has not engendered the level of cooperation we have seen develop in Europe during the past decades. Undoubtedly, organizations such as the Association of Southeast Asian Nations (ASEAN), the Asia-Pacific Economic Cooperation organization, and the Trans-Pacific Partnership, among many others, have made positive contributions to regional politics over their life spans. Nevertheless, no universal consensus exists about either the circumstances under which these organizations are effective or their future role. Regional leaders point to the dramatic economic transformation over the past several decades as the basis for regional cooperation, but such efforts have largely failed. Heribert Dieter, of the German Institute for International and Security Affairs, observes that although the Asian financial crisis of 1997–98 prompted regional leaders to create “a range of projects in trade and finance as well as integration projects covering the harmonization of regulation,” these regional institutions remain weak. For example, in the wake of the Asian crisis, ASEAN established the ASEAN Surveillance Process (ASP) in order to provide “collective supervision of financial markets.” Dieter further notes that “although the surveillance mechanism seemed to address some of the problems that contributed to the emergence of the Asian financial crisis, on closer inspection the ASP is not yet a meaningful regime for supervising regional financial markets.”¹³

The difficulty that the Asia-Pacific states have with institutionalizing regional security or economic organizations should not be surprising. Strategists dealing with the Asia-Pacific area must recognize that the historical record favors bilateral agreements rather than multilateral
ones and that each nation’s history and development are markedly different from those of its neighbors. Thus, finding common ground for multilateral cooperation will require understanding of the unique interests of all of the states in the region.

Fifth, some Asia-Pacific states have concerns about the current and future intentions of the United States in the region. For more than 100 years, America has maintained a presence in the Pacific. Following World War II, that presence increased dramatically. Forces from South Korea to Japan to Australia ensured stability in the region against the perceived growth of communism during the Cold War. However, starting with Operation Desert Storm in 1990 and reinforced by the terrorist attacks of 11 September 2001, some had the impression that Washington had shifted its interests from the Pacific to Southwest Asia. Although the United States maintained significant forces in South Korea and Japan, nations like Australia and the Philippines began to question what role the United States will play in the future, especially given the dynamic Chinese economy. This situation has resulted in a near bifurcation of attitudes toward US involvement in the region.

The rise of the Chinese economy interjected a new dynamic into the area. Asian economic and security issues have become more complex, in large part because they are becoming intertwined. US allies now have to consider two strategic partners—one on the economic front and another on the military and security fronts. The growing and increasingly integrated economy—dominated by China—is creating prosperity for many nations in the region but also causing some degree of concern. Australia—one of America’s closest partners—has found itself in an unexpected security and economic position, one shared by many others. On the one hand, it has been one of America’s closest allies since World War II. In his Australian
speech of 17 November 2011, President Obama emphasized that “bonds” between the two nations “run deep... And it will be a reminder that—from the trenches of the First World War to the mountains of Afghanistan—Aussies and Americans have stood together, we have fought together, we have given lives together in every single major conflict of the past hundred years. Every single one.” On the other hand, the Australian economy thrives due to trade with China. In the first decade of the twenty-first century, that trade has tripled. This trend has continued in the second decade as well. China purchases 9.5 percent of Australia’s coal and 20 percent of its natural gas. Anthony Harrington succinctly concludes that “Australia’s economy has boomed on the back of the rise of China over the last decade or so.”

The Cold War presented a simpler, though at times more threatening, environment. Two clear choices confronted most of the world. The Soviet Union’s socialist economy not only represented an alternative to America’s capitalist system but also was ideologically determined to overthrow capitalism. In such a bipolar world, nations such as Australia seem to have had an easy choice concerning security and economic matters—it wanted both democracy and capitalism. Although proclaiming itself a “communist” state, China operates under a capitalist economic structure that since the 1970s has brought prosperity to many nations of the region. Its thirst for natural resources enriched Australia and others but has also created regional uncertainty. Hugh White, former Australian Deputy Secretary for Strategy and Intelligence in the Department of Defence and the first Director of the Australian Strategic Policy Institute, has advised that (unlike the practice during the Cold War) one can no longer lump the Asia-Pacific region into two camps. Yet, even though Australians share in China’s economic growth, they are uncertain what to make of a potentially powerful China in the decades to come and unsure
about America’s own policy toward China. White writes that “this has raised some concerns in
America, and in Australia among those who wonder how Canberra will balance its growing
economic, political and even strategic alignment with Beijing with its alliance with Washington.
But on this issue also the government has been resolutely optimistic—at least so far.” For the
time being at least, Australia has had a singular vision: do not get involved with any disputes
between Beijing and Washington. Many suggest that Canberra should enjoy both the friendship
and security of the United States while continuing to pour coal into the holds of a seemingly
endless line of Chinese cargo ships.18

Australia’s predicament is replicated among many nations in the region. A number of
them prosper by China’s dynamic economy yet remain unsure of its current and future
intentions; at the same time, they enjoy political and social relationships with the United States.
The predicament is as real as it is complex. Speaking as a one-time member of his government,
White again sums up the central issue not only for Australia but arguably for most nations of
the Pacific: “We want Asia to keep growing strongly, and for Australia to be part of that growth.
And we want America to stay engaged in Asia, to prevent domination by China, but not in a way
that forces us to choose between them, or inhibits Asia’s economic growth.”19

In the complex environment of today’s Asia-Pacific region, the United States has new
opportunities to strengthen regional political and economic stability by using existing and new
international regimes. Becoming the transitional leader in the region would allow the United
States to leverage existing cooperative forums to create new avenues in the region,
shepherding in an era in which the rule of law and cooperation become the international norm.
Multinational organizations do exist through which the United States can begin its journey to
transitional leadership, perhaps using ASEAN to create informal regimes and implicit arrangements that meet the interests of member states and to provide stability. The challenge lies in ensuring a peaceful rise of the region’s major powers, including China, incorporating each into the global, capitalist economic structure. After all, it is even in China’s best interest to continue the path it took in the 1970s after that country opened its economic markets.

One might reasonably ask whether the region will accept the United States as a transitional leader, especially in light of the past few decades. On this issue, there is room for optimism. Discerning any region’s views toward the United States often escapes serious analysis. Many observe that even though they embrace the US culture, they may still riot in protest of its policies. In his comprehensive survey of global anti-American sentiments, Giacomo Chiozza concludes that “the image of the United States is not as tarnished as is often dreaded nor is it as shiny as is occasionally dreamed.”

Chiozza and Ajin Choi have examined the evolution of South Koreans’ view of America between 2002 and 2007 by comparing the answers to nine questions, such as whether South Koreans favor the US war on terror and the US commitment to promote democracy. The authors concluded that, in addition to looking favorably on the United States for the most part and believing it an ideal to emulate in certain aspects, South Koreans want America to lead on the most important international problems—from the spread of nuclear weapons to pollution and other environmental issues.

We have reason to believe that these types of attitudes toward the United States are not confined to American allies. A longtime observer of East Asia recently stated that “the USA
remains by far the most powerful and important country in the world, and all East Asian states would like more, not less, American attention to the region. Yet this also means that East Asian states know they cannot rely on, or expect, unquestioned US support. Most East Asian states welcome or accept US leadership.\textsuperscript{23}

Because of the level of uncertainty across the region, US leaders will need a concrete approach exemplified by realistic expectations and patience. Specifically, instead of setting a goal of getting \textit{all} of the states of the region in cooperative regimes and trying to tackle all of the important policy issues, America should begin its efforts at the \textit{subregional} level. Multilateral, informal arrangements on issues that affect every nation in this region will be doomed from the start. The factor of a lack of regionalism once again is key here. But by tackling a series of subregional issues—not necessarily sequentially but addressing only those it can afford economically and diplomatically—the United States will build momentum that strengthens the informal modes of cooperation into more formal ones subregionally. \textit{Only then} can the United States work at the regional level. Even proceeding on a subregional level, like Central Asia or Northeast Asia, is a daunting task. Even though the United States likely will not prove successful until well beyond 2020, it should begin efforts now.

Adapting the ideas of William J. Lahnemen are important for thinking about subregional leadership initiatives that do not overextend America’s abilities. In his article “Changing Power Cycles and Foreign Policy Role-Power Realignments: Asia, Europe, and North America,” he attempts to explain and then prescribe ways that nations can align their foreign policy roles with their power to play them. He thus emphasizes a conscious correlation between what role a state needs to play regionally or internationally and the material capability that same state
needs to actually maintain that role. To correlate power to role, Lahneman suggests breaking down the role of a state into subgoals that more accurately allow it to correlate power to its overall role in the international system.24

A key element is a state’s *ascribed role*—one that comes from a nation’s history and how other states view it. The United States’ *ascribed role* should be clear at this stage. Because of its historical roots in the Pacific and its dominant material capability, America’s ascribed role is that of a transitional leader. Perhaps more importantly, many other states see the United States in this role as well.25

Next, it needs to have a *declaratory role*. This is of great importance since many underlying problems have sprouted from “benign neglect” over many years. This role requires a “whole of government” approach. Although the President’s speech was a fitting start, it was just that—a start. The United States must first engage with the core nations at all levels of government: Defense, Justice, Treasury, to name but a few. The declaratory role is an elaboration of America’s foreign policy in this region, involving federal agencies that will play a role in the strategy of transitional leadership.26

If the United States is to become the transitional leader, it must begin with efforts to strengthen its formal, institutional ties to long-term allies and partners of America in the region, such as Australia, Japan, South Korea, and Thailand. Unfortunately, these nations are not only among the closest to the United States but also they are tragically and ironically among the nations that have expressed concerns over its future role in the region. Reassuring the Asia-Pacific of its long-term commitment, the United States can then rely upon those long-term allies and partners to establish subregional regimes to address critical issues. These regimes can
become the cornerstone for stability within the region. They will have the best possibility to resolve conflicts successfully by bringing states together to reconcile conflict through the informal mechanisms of regimes. Thus, they will play a greater part in stabilizing the region by establishing cooperation as the principal means through which states attain their mutual interests. In these regimes, persuasion and social influence help spread the process of socialization, in which cooperation and collective solutions occur. If a nation acts cooperatively because of internal motivations (i.e., because it believes that doing so is the correct course of action) rather than external factors (i.e., because it is receiving some material benefit or, in other words, being “paid off” to be a part of the institution), then conflict management, stability, and certainty in both the economic and security realms will become more predictable and lead to more stability. Moreover, informal institutions such as regimes may be more prone to socialize states. A prominent international relations scholar has observed that “an efficient institution might then be reconceived as the design and process most likely to produce the most effective environments for socializing actors in alternative definitions of interest. As I have argued . . . such an institution may have to be informal, weakly institutionalized, consensus-based—the opposite of an institutional design . . . [with strong, formal structures to promote cooperation]” (emphasis in original).27

The whole-of-government approach will figure prominently in the United States’ becoming the region’s transitional leader, just as its armed forces will prove pivotal in this process. The soft power that exists within the Department of Defense—more specifically, the United States Air Force—is unrivalled around the globe. In addition to sheer military might, the
ability to improve the human condition through air, space, and cyber power will be a significant part of reassuring the region that America’s role is unequivocal.

Air Force Strategy for the Asia-Pacific Region’s Most Likely Path

The Air Force’s development of an approach toward supporting the United States as the region’s transitional leader should capture and guide the thinking, planning, development, and execution of the integrated whole of Air Force power. In other words, a strategy focuses on ways to create effects in any and all domains—be they air, space, cyber, land, or sea, and from the global to tactical levels—to support a joint force commander’s requirements.

The Air Force contributes to this integrated strategy though its five enduring contributions—holding targets at risk; building regional influence; maintaining rapid global transport; establishing responsive, full-spectrum intelligence, surveillance, and reconnaissance (ISR); and controlling domains.28 This approach proposes using Air Force capabilities resident within these five categories in a way that maximizes their potential. The following brief discussion addresses how these actions contribute to the regional end state.

Holding Targets at Risk in the Asia-Pacific Region

The Air Force’s enduring contribution of holding targets at risk is vital to achieving deterrence, aiding in assured access to the global commons, supporting economic interdependence, and defeating aggression if necessary. Deterrence operations contribute to regional peace and stability, which in turn help keep the global commons open, which in turn allows for economic development and the potential for greater economic interdependence. The Air Force contributes to effective deterrence through nuclear deterrence operations and
with conventional and cyberspace forces able to conduct global precision attack. Conducting nuclear, conventional, and cyberspace deterrence operations to assure allies, dissuade proliferation, and deter potential adversaries supports not only the Asia-Pacific region but also all geographic combatant commanders. If deterrence fails, the ability to defeat an act of aggression quickly through the use of conventional strike and/or cyberspace assets assures access to the global commons and contributes to the quick return of regional stability.

**Deterrence operations—nuclear.** Nuclear deterrence operations are the most critical core function provided by the Air Force to support the end state of the Asia-Pacific’s “most likely” path. It is the most critical because of the stability that nuclear deterrence brings to the region, the counter it presents to other nuclear powers there, and the potential use of nuclear weapons if deterrence fails.

The region must view American nuclear deterrence as credible. Regional partners from South Korea to Australia and the Philippines must have confidence in the US nuclear umbrella. A loss of confidence could lead to the proliferation of nuclear weapons in the region as countries develop their own nuclear capability or—potentially more detrimental to US national interests—realign their national policies with those of other nations in the region.

**Deterrence and global attack operations—conventional and cyberspace forces.** Conventional and cyber forces able to conduct global precision attack have a dual purpose in relation to the concept of holding targets at risk. These forces offer nonnuclear ways and means to conduct conflict deterrence in the Asia-Pacific region as well as the more likely form of military force used to defeat aggression. Both deterrence and the use of force against aggression help assure access to the global commons and create stability, promoting economic
growth and the potential for economic interdependence. The ability to strike rapidly and persistently at strategic targets such as leadership, critical infrastructure, and, at times, fielded forces anywhere in the Asia-Pacific region can deter aggression or end it quickly if deterrence fails.

Building US Influence in the Asia-Pacific Region

Airmen play an increasingly important role in building US regional influence. Every Airman is a diplomat, not only representing military might but also demonstrating every day how militaries operate with democratic societies. Further, Air Force leaders in the region spend more time conducting diplomacy than directing kinetic military effects on the battlefield. Air Force efforts to build partnerships with foreign countries must move from the “nice to do” category to the “necessary” one. Building influence in the Asia-Pacific region is essential to maintaining access to the global commons, strengthening economic interdependence, and, if necessary, helping defeat aggression. Strong regional partnerships enable regional access and international cooperation to keep global domains open if contested, promote economic growth and interdependence through regional stability, and—if conflict does occur—provide allied basing, logistical support, and combat forces to defeat aggression. Building partnerships comes through interaction with regional governments, militaries, and populations. This interaction occurs mainly through military engagement, security cooperation, and foreign humanitarian assistance.

Military engagement and security cooperation with Japan, South Korea, Australia, Thailand, and the Philippines are strong and must continue. Along with these critical allies, we should give attention to expanding interaction with countries that in the past have been
suspicious of contact, such as China, Vietnam, India, Indonesia, Singapore, Malaysia, and the Pacific Island countries.

**Maintaining Rapid Global Transport in the Asia-Pacific Region**

Rapid global transport by means of airlift, in-flight refueling, and global communications networks offers senior leaders the ability to project power as well as conduct stability and humanitarian-relief operations. Rapid global transport ties the region together, supplying airlift, air refueling, and communications infrastructure that enable strike missions to defeat aggression, while at the same time conducting missions that support regional nations in need. As it has demonstrated time and again, when disaster strikes—such as the Indonesian tsunami or the Fukushima Daiichi nuclear disaster in Japan—rapid global transport provides the first American response to those in distress.

**Establishing Responsive, Full-Spectrum ISR in the Asia-Pacific Region**

Responsive full-spectrum ISR in the Asia-Pacific is essential to enabling operations that give decision makers essential intelligence to make informed decisions. Decision superiority enables commanders to design operations that hold targets at risk through deterrence and strike missions and help build US regional influence through information sharing with partner nations, thereby strengthening relationships and contributing to achievement of the desired end state. Establishing responsive, full-spectrum ISR for the Asia-Pacific region requires conducting and synchronizing surveillance and reconnaissance assets across global, theater, and tactical levels throughout all domains. The Air Force should integrate its air, space, and cyberspace surveillance and reconnaissance assets with other land and naval assets—and, at
times, those of other international partners—to leverage the greatest amount of leadership within the region. The Air Sea Battle initiative offers a framework to identify and develop such integrated, cooperative structures and processes—those necessary not only to support the joint fight but also to leverage space and cyberspace capabilities as part of the overall mix of ISR capabilities, joining with coalition and interagency partners.\textsuperscript{30}

**Controlling Domains in the Asia-Pacific Region**

The Air Force has joint responsibilities within the cyberspace domain; additionally, it is the lead service for control of the air and space domains.\textsuperscript{31} Securing the high ground enables freedom of action for the entire spectrum of military operations with joint and coalition operations, not to mention civil and commercial activities. Freedom of lines of communications—through air, space, cyber, or sea—enhances and enables the role of the United States as the transitional leader. The unimpeded flow of commerce and information is critical to the long-term stability of the region. The ability to create and maintain freedom of action produces the opportunity to conduct ISR operations; share information on secure and open networks; support objectives through airlift and air refueling; maintain the viability of commercial, civil, and military lines of communication; and strike targets to defeat aggression. These activities contribute to holding targets at risk by making deterrence operations credible and, if deterrence fails, by making strike operations effective. The activities also help build regional influence by assuring access to the global commons of air, space, and cyberspace. Access to the global commons gives nations in the region the opportunity for economic expansion and interdependence. It also allows them to partner with the United States in responding to civil and military crises in the region. One cannot overstate the fact that domain
control, applied at the appropriate degree for operational objectives, is a critical prerequisite for all operations and an enabler for attaining this path’s end state.

Summary

The Asia-Pacific region is dynamic. The bipolar world of the Cold War is a distant memory. The region is experiencing an economic boom as much of the West remains mired in the recession that began in 2007. Some countries question American leadership; others challenge it. Is a new leader emerging while the old one fades, or is the natural order of 2,000 years simply reasserting itself? One senior Asian official, who asked not to be named, remarked, “We have paid tribute to China in the past, and will do so again . . . if the United States allows it.” The path toward transitional leadership is still under construction. It is in the United States’ national interests to take an active role in helping create the course that leads to strengthened regional, political, and economic stability via existing and new international regimes. As part of an integrated national strategy, the Air Force can and should provide significant capabilities to help achieve this end state.

Notes

2. Ibid., 41.


14. Ibid.


25. Ibid., 7.

26. The discussion of roles comes from power-cycle theory, which explores “the nature of power-role gaps (misalignment) in contemporary world politics.” Ibid., 97. Interestingly, Lahneman suggests that close coordination with allies will produce great dividends for the United States in managing its “power-role gap” (109).


31. Department of Defense Directive 5100.01, *Functions of the Department of Defense and Its Major Components*, 21 December 2010, p. 27, par. 2a; p. 28, par. 2h; p. 34, par. 6b(2) and 6b(5).
Chapter 5

Findings and Recommendations:
US Air Force Strategy in the Asia-Pacific to 2020

US Air Force Research Institute

Based on the Eisenhower administration’s Solarium Project, this study seeks to undertake what Michèle Flournoy and Shawn Brimley describe as strategic planning or foresight analysis. More than six decades since undertaking Solarium, the federal government still has no integrated effort for national security planning across the governmental enterprise. Thus, it needs to find a way to keep urgent problems from crowding out important, long-term trends and issues.¹

Like Solarium, this study examined three paths to consider “future trends, possible developments and wildcards “that inform national security and Air Force decisions.² As a reminder, these paths included a best case, in which the Asia-Pacific region proceeded along a path toward mutual cooperation largely bounded by the rule of law; a worst case that placed the region on a path toward open hostilities; and a most-likely case, which largely extrapolates the status quo into the time frame under analysis.³ The research team developed each of these paths with 2030 in mind but analyzed the world at a waypoint in 2020 on the path leading to the 2030 destination as a means of informing near-term Air Force decisions.

The best and worst cases require deviation from the status quo. Stated differently, “trip wires” must be crossed to push the United States onto either path. For the best-case scenario to emerge, disputant states in the region would need to find a mechanism or set of mechanisms by which they agree to settle their differences peacefully—a sequence of events
that would be readily recognizable if it occurred. Similarly, deviation toward the worst case, as
described in chapter 3, would take place only if an ongoing dispute became militarized—
perhaps by accident—resulting in the onset of hostilities and the possible triggering of mutual
defense treaties, thus widening the dispute and conflict.

This chapter seeks to integrate these three paths in a method similar to the Project
Solarium design. As in Solarium, the research team cross-compared the various trends, possible
developments, and wild cards of the three paths. Based on analysis of recent and historical
trends, the middle path appears more probable than the other two (hence the descriptor “most
likely”); consequently, much of the analysis focused on this path. However, because the other
two paths are possible, throughout this analysis the team ensured that it kept the “best case”
and “worst case” in view.  

This chapter begins by presenting the findings from this analysis, which in most cases
are trends or developments that the team found common to all three paths. As such, these can
be considered definitive conclusions or “predetermined elements.” The chapter also discusses
findings particular to potential conflict in the region. Although not necessarily embedded in the
best-case path, these findings appear in both paths that have the potential for conflict. Further,
should the Asia-Pacific region not move along a path toward mutual, peaceful collaboration,
such findings are also essentially predetermined elements. Next, the chapter explores the
implications of these findings, synthesizing what they mean for our nation and our Air Force.
Lastly, the chapter evaluates these implications, using doctrinal constructs as a lens to provide
definitive recommendations for what the Air Force must do to be ready for future possibilities
in the Asia-Pacific. The chapter then discusses the concept of “transitional leadership,” which
this study considers the key to shaping the region in a manner that decreases the probability of a worst-case scenario.

**Findings**

By cross-comparing the three paths and the events, trends, and actions of the major players, the study team synthesized a set of findings regarding the economic, military, and diplomatic backdrop against which activities in 2020 will take place. These findings represent the basis for the conclusions on airpower and the recommendations that follow later in the chapter.

**Economic**

Among the more important findings is that Asian economic growth and integration will continue. The Asian economy is both rapidly developing and becoming more integrated through increasingly dynamic interregional trade. This dynamic remains constant across all three paths, with only minor variations in growth predictions for the region as a whole—or for the region’s individual states.

China’s economic growth will continue, tied in great part to the larger Asia-Pacific region. Although some variation occurs in the estimates of China’s growth, all sources consulted indicate that its economy will continue to develop and do so at rates faster than those of Europe and the United States. Despite the existence of some variation on specific projections, several trend analyses—such as the International Monetary Fund (IMF) data, previously mentioned—suggest that China will surpass the United States in total gross domestic product (GDP) before 2020. It is important to realize, however, that China’s per capita income and
standard of living will remain markedly below those of the West—or even many of its Asian counterparts. Further, as Kevin Holzimer, Jeffrey Hukill, and Dale Hayden point out in their “most likely” analysis, total GDP is not a precise measure of national power. However, this continued growth with projections of interconnected trade possibly reaching 30 percent of the regional economy points to a Chinese nation that will have substantial economic clout which increases over time.

Asian growth will have some uneven spots; nonetheless, it will continue to be broad, resulting in the continent’s playing a larger role in the global economy. Data on North Korea is sparse, but no evidence indicates that the robust growth experienced by East Asia will spread to North Korea. Japan’s economy is expected to develop slowly but steadily at rates around 2 percent during this period. Meanwhile, virtually all of the rest of the continent is expected to have growth rates in excess of 6 percent. The result, as mentioned in earlier chapters, is that Asia—as a collective whole—surpasses North America in total economic productivity, thereby making it increasingly the nexus for international trade. By extension, the Strait of Malacca and transit routes around the Asian periphery become economically more important with time.

Military

Asian military spending is increasing rapidly, a trend that will continue over the next eight years. The International Institute for Security Studies (IISS) concluded that the countries of Asia now spend more on defense than does the whole of Europe. The IISS estimates the combined defense spending of the region at $287 billion, with a growth rate of 4.94 percent per year.
Within this Asia-Pacific region, China’s military spending is growing fastest although it will not pass the United States in either overall military expenditures or global military capability until well after 2020. The IISS estimates growth in China’s military spending at just below 10 percent in the past year. However, the longer-term trend in Chinese spending is even more robust. As discussed in earlier chapters, China’s outlays for defense have risen at an average rate of over 13 percent per year so far this century. Although approximations of this spending vary, the Chinese government estimated its budget in 2012 at $106 billion, with valuations from a variety of sources largely clustered between $110 and $140 billion. If all military-related expenditures are included, the latest Department of Defense (DOD) estimate of Chinese spending comes to between $135 and $215 billion. This range reflects the uncertainty in these estimates. Certainly, however, these numbers are very much lower than total US spending, and even though China is rapidly developing its military capabilities, it is doing so from a baseline well below that of the United States. The IISS believes that even if China’s economy continues to grow at an unchanged rate, its military spending will remain inferior to that of the United States until at least 2025.

Even though China’s overall military capability is inferior to that of the United States, the geography of the Asia-Pacific region gives it the advantage of shorter interior lines of communication. In the event military operations became necessary in the region, the United States would have the tyranny of distance to overcome, accompanied by significant issues with supply and sustainment. Demands for oil and other consumables would be significant, placing added importance on keeping major shipping and air routes open. Lastly, China’s recent emphasis on antiaccess and area-denial strategies creates an additional set of challenges that,
in some scenarios, we may have to surmount. The existence of antiaccess systems and the
distances across the Asia-Pacific region limit the ability to project force and must be considered
in military planning.

Space access is not only vitally important in this region but also vulnerable. Vast
distances make the region too large to attempt to conduct intelligence, surveillance, and
reconnaissance (ISR) solely through the use of remotely piloted systems. Whether for
humanitarian operations (best case) or combat operations (worst case), cross-oceanic and in-
theater navigation will depend upon the Global Positioning System (GPS). These two issues, the
 gathering of data and navigation, will demand robust access to space-based systems. Yet, both
the United States and China have successfully conducted direct-ascent intercepts of satellites,
showing that these systems are vulnerable. Strong evidence suggests that directed-energy
weapons may expand this vulnerability in the years to come.\textsuperscript{16} Complicating matters is the risk
of leaving behind significant debris should space-based assets come under attack—a situation
already problematic for some orbital configurations. This, in turn, could make space access
more difficult still.

Should the best-case path not prevail, significant risk attaches to our ability to maintain
credible nuclear and extended deterrence as we approach 2020—and in the years beyond. The
Air Force’s pieces of the US nuclear triad are aging, and parts of it may be unable to carry out
their mission by the end of the decade. As Hagel points out in the worst case, the age and radar
signatures of the B-1 and B-52 call into serious question whether they can penetrate advanced
antiaccess systems already deployed by two of the region’s nuclear powers and sought by a
third. Even the early-generation stealth technology of the B-2 may be obviated by technological
advances coming in the next seven years. Further, the aging nature and reliability of the
weapons that sit on our intercontinental ballistic missile (ICBM) fleet have already been called
into question publicly. Meanwhile, as the United States and Russia negotiate nuclear arms
reductions, the available evidence suggests that other states in the region—including North
Korea, India, and Pakistan—are expanding the size of their arsenals.17 The combination of these
dynamics extrapolated over time can cause US allies and potential adversaries alike to believe
that the US nuclear umbrella has holes in it.

Diplomatic

The question of whether the United States is containing China remains extremely
sensitive, but in reality, China is containing itself. It has publicly claimed that America is engaged
in a deliberate attempt at containment, which the People’s Liberation Army (PLA) warns “is
making the situation there tenser.”18 In fact, however, a change in the execution of China’s
foreign policy beginning in late 2008 or early 2009 has caused a shift in the perception of its
neighbors. Until the Beijing Olympic Games, China worked to avoid confrontation with regard
to its maritime and land disputes. Through compromise, it even resolved some of its land
disputes during this time. After 2008 China’s large-scale demonstrations of force, using flotillas
of official governmental and naval vessels, have caused a shift in regional opinion. States that
once viewed China solely in terms of their economic benefits derived from its opening and
growing economy began to view China as a potential rising hegemon, leading them to engage in
balancing behaviors against Beijing.19 In the end, regardless of the issue’s sensitivity, China is
pathologically containing itself.
Some multilateral institutions exist in the Asia-Pacific region, but they lack the authority to resolve the outstanding boundary disputes. China has remaining land boundary disagreements with India, one of which involved Chinese troops crossing the line of control in May 2013. In addition, China has ongoing disputes with Japan regarding islands and maritime territory in the East China Sea as well as with its neighbors to the south regarding much of the South China Sea. Although regional institutions such as the Association of Southeast Asian Nations (ASEAN) have proven useful in establishing a mechanism for discussion—even a code of conduct—for these disputes, they lack the authority and power to resolve them.

It is possible for the United Nations International Court of Justice (ICJ) to adjudicate the differences over maritime boundaries, but this will not likely occur prior to 2020. Deferring adjudication to the ICJ requires the consent of all disputant states. In the Fourth Xiangshan Forum in Beijing in late 2012, senior PLA officials indicated China’s unwillingness to consult the ICJ until the boundary disputes had remained in an impasse status for at least 10 years. This implies that the ICJ will not be consulted to resolve these matters before 2020 and that the disputes will remain active throughout the study’s time frame.

Leading indicators will tell us which path is unfolding as we head toward 2020. These indicators take the form either of potential trip wires as we go down the worst-case path or of “signposts” suggesting that nations of the region are choosing a better or even best-case path. The path toward open hostilities among the major regional powers is not one of rational decision making but a course that would be triggered by miscalculation or mistake. As argued in the most-likely case, the regional boundary and border disputes will largely still exist in 2020. Continued intrusions and shows of force by governments—and, potentially, militaries—of
multiple sides in these disputes are also probable. These shows of force, like the one between the Philippines and China in 2012, can become extremely intense, with dozens or even more than 100 vessels on each side arrayed against the other. In some cases, shots have been fired—but so far between a military vessel and a fishing boat, not between two militaries. Tensions, emotions, or miscalculations could cause one of these disputes to evolve into armed hostilities, thereby crossing a trip wire and leading to a worst-case outcome. The United States has multiple treaty partners in the area, and numerous bilateral agreements exist. If hostilities trigger any of these, a local boundary dispute could rapidly spiral toward a conflict between multiple parties—an outcome that all of the disputants have gone on record as hoping to avoid.

Signposts leading to the best case are different. If the Asia-Pacific region begins to trend in the direction of the best-case path, then we will not see more incidents in which one or more countries transgresses a disputed boundary. Rather, we will see increased use of negotiation and of a formal mechanism for resolving international disputes, such as the ICJ. Should China and the nations with whom it has both land and boundary disputes either start reaching bilateral settlements and/or begin placing their differences on the ICJ docket, then it will be clear that a trend away from the worst-case path is under way.

**Implications of the Findings**

Although the United States cannot drive the Asia-Pacific region along a particular path, we can take actions related to the findings above that will make it easier for the region to travel a less conflictual and mutually beneficial path. The United States should build on its recently articulated “pivot to Asia” to broaden its focus beyond merely the ongoing war on terror, should better understand the region, and should build a military—specifically, an Air Force—
capable of addressing the findings listed above. Many of these actions lie outside the purview of the DOD, but it is important to put the contributions of the Air Force into their broader context.

Although the nations of Northeast Asia never perceived the United States has having left, President Obama’s recently articulated pivot to Asia does have meaning for the rest of the region, and we must now build upon this declaration. In his announcement, the President spoke of his “deliberate and strategic decision” that the United States “will play a larger and long-term role in shaping this region and its future, by upholding core principles and in close partnership with our allies and friends.” The announcement sought to confirm to both his Australian hosts and other allies across Asia that the United States—as a “Pacific nation”—would “stand for an international order in which the rights and responsibilities of all nations and all people are upheld. Where international law and norms are enforced. Where commerce and freedom of navigation are not impeded. Where emerging powers contribute to regional security, and where disagreements are resolved peacefully. That’s the future that we seek.”

This speech and subsequent moves by the administration focus on Asia; however, Asia-Pacific states remain confused about the current and future intentions of the United States. For more than 100 years, America has maintained a strong presence in the Pacific. Most of the first half of the twentieth century was spent planning on preventing Imperial Japan from upsetting the regional balance. As China’s dynamic economy rose over the past 30 years, US absence from the central and southern Asia-Pacific region raised doubts in many states—including America’s traditionally closest partners—regarding what role it would play in the future. The US “war on terror” added to these concerns since America largely found itself tied down in two
major wars removed from the Asia-Pacific, hunting transnational terrorists. The Bush Doctrine—“You’re either with us or against us in the fight against terror”—placed many Asian states in an awkward position. Most of them did not have major terrorist threats within their borders and were perplexed as to what the United States expected from them. Others—such as Thailand and Indonesia—had been battling insurgencies and terrorist for years yet received little attention from Washington. “On balance,” one analyst observed, “the obsession of policy makers in Washington with the so-called war on terror has weakened the US position in Asia.”

In the rare instances in which the United States took a prominent role in the region, it appeared to many that US actions amounted to attempts at “containing” the rise of China, a stance that worried most of them—if not all. As another writer noted, “Since 2001, the United States has been essentially AWOL from Asia.”

As the United States pivots to Asia, the nation must use this focus to improve its understanding of the region and thus benefit its partners rather than harm them, as occurred in the financial crisis of the late 1990s. Many Asian states still resent the timing and means with which the United States attempted to stop the Asian financial crisis of 1997–98. It is difficult to overemphasize the financial carnage that occurred, which has been compared to the Great Depression of the 1930s. Richard Higgott describes it as “the most traumatic experienced in Asia since decolonization and the Cold War confrontations of the 1950s and 1960s.” Attempting to assist the region, the United States and the IMF overlooked unique business practices in the region. In many states—such as Thailand, where the crisis originated—business and government interests are often blended. In fact, these states’ economies depended on “intimate connections between business and government, underpinning government
intervention in support of particular industries.”\textsuperscript{30} Yet when asked for assistance, the United States and the IMF employed their “tried and tested” methods for dealing with such crises: decrease domestic spending while reforming the economy along liberal economic lines of the West, insisting upon separation of public and private enterprises. South Korea, Thailand, and Indonesia all rioted against these “imposed” reforms.\textsuperscript{31} The US response to the Asian financial crisis and the effects the global war on terrorism are but two examples of a decline in America’s stature in the Asia-Pacific region. Morton Abramowitz and Stephen Bosworth, two former US ambassadors to Asian countries, have made the claim even more strongly, writing in 2005 that “since the end of the cold war the U.S. has paid attention to Southeast Asia mostly when there is trouble. America’s initial lack of attention to the region contributed to the financial crisis of 1997 which went on to ravage much of Asia and threaten global economic stability. The U.S. is still paying the costs of that episode in Asian public opinion.”\textsuperscript{32} By paying continuous attention to the region and by understanding it better, the United States can alleviate the doubt created in the minds of our partners.

As part of creating a better understanding and partnership in the region, the United States should help build regimes that contribute to stability. Multilateral organizations and regimes in Asia are young. Yet ASEAN may be one existing structure useful for creating informal and implicit arrangements (i.e., regional regimes) that do meet the interests of the member states and offer stability.\textsuperscript{33} As a member of the “ASEAN Plus” structure, Washington should reenergize its role in established regional institutions and place itself at the forefront of establishing new international regimes—the form of cooperation that best fits the history and nationalism of the region and that has the best chance of success. This is important for two
reasons. First, it will have the best chance of successfully resolving conflicts. Second, bringing states together to reconcile conflict through the informal mechanisms of regimes will play a substantial role in stabilizing the region by establishing cooperation as the primary means through which states attain their mutual interests. In these regimes, persuasion and social influence help spread the process of socialization, in which cooperation and collective solutions may occur endogenously rather than exogenously. This has the potential to reduce the economic and security instability that has developed over the past 30 to 40 years.

Lastly, if events in the region move along the most likely or the worst-case paths, the United States and its Air Force need to maintain a robust capability to—ideally—deter conflict and protect our partners or allies should strife arise in the region. US armed forces play a role in diplomatic efforts, insofar as they reassure partners that America’s role and support are unequivocal. The message we must send in the Asia-Pacific region is that although we do not seek conflict, we will maintain a position of strength, committed to ensuring that our partners and allies can create regimes that promote economic stability and security. Ideally, such regimes will reach to every nation in the region with a stake in the dynamic and growing Asian economy, including China. Each agency must devise its own strategy, which needs to be integrated with those of all of the other US departments. Because such a product lies outside the scope of this study, we now examine how the US Air Force should position itself to support this overall end state.

The Concept of Transitional Leadership

These findings indicate that the United States needs to work to become a “transitional leader” that engages the Asia-Pacific community via several avenues to assist it in peacefully
transitioning from an era of American leadership to one in which Asia will be either a major focus or perhaps the major focus of the world. The term “transitional leader” implies a role for leadership by the United States, the world’s preeminent power during this time period.

Transitional leadership is defined as the sum of its core elements: leading from a position of strength, using that leadership to build partnerships and establish regimes that enhance freedom of navigation and commerce, fostering and continuing economic integration, leading from a position of understanding and working within the cultures and governmental structures of the region, and using our military might to conduct humanitarian-relief operations and disaster response to ensure that no single natural event derails the regional economy. To realize all of these elements of leadership, the United States must maintain sufficient power, both conventional and nuclear, to assure allies and partners in the region that it indeed will be able to lead from a position of strength. Using this position, we must work within existing multilateral regimes (such as ASEAN-Plus) and others that may develop to enhance belief in these multinational mechanisms so that regional disputes may be handled through consultations and negotiations. If these fail, fostering increased trust in the regime of rule by law may result in arbitrating some disputes but settling all of them by using mechanisms other than armed conflict. To be a transitional leader, the United States should not believe that a “cookie cutter” approach to solving world problems can work in all situations and understand the unique culture and governmental structure of each nation in the region. Different countries require different approaches to enhance economic growth, healthy governance, and trust. We must not repeat the mistakes of the late 1990s. Lastly, although the United States must not create a provocative presence in the region, we do need to establish interoperability with allies
and partners alike. Because the Asia-Pacific region is highly disaster-prone, the increased presence of airlift, tanker, and supply capabilities—all of which are useful in disaster relief—gives the United States the chance to work alongside every nation in the region. It is in the mutual interests of all states of the world that no natural disaster derail the regional economy since each nation would suffer. As such, establishing a presence in the region to the extent that allies and partners are willing to do so will assist America in leading from a position of strength. Moreover, it will ensure freedom of navigation and commerce; improve our understanding of other nations, including our allies’ and partners’ culture and governmental structure; and allow us to use our collective might to assist in leading a transition in the Asia-Pacific based on the same norms that the world has used since the close of World War II. This study advocates that the United States adopt this form of leadership toward the Asia-Pacific basin.

The US Air Force’s Contribution to Transitional Engagement

Perhaps more ink has been spilled and more paper used on various ways the interagency process should work than on “the rise of China.” Be that as it may, the US Air Force has the opportunity to play a fundamental role in the region by working with our friends and partners in the Asia-Pacific region, our sister services, and other government agencies, bringing to bear our own unique and distinctive capabilities. This section discusses the fundamental elements of airpower, airpower concepts, and the ways that the Air Force should employ these concepts to address the findings and implications described above.
Fundamental Elements of Air Force Power

Each military service possesses certain fundamental elements that make unique its contributions to a joint operation. For the Air Force, these elements are speed, range, persistence, and payload. Exploiting the interaction among these elements through sound operational design enables decision makers to use the service’s capabilities to attain desired ends.

*Speed* enables the compression of time. Few boundaries prevent Air Force power capabilities from quickly concentrating and then delivering desired effects at any point. Depending upon the capability used, “quickly” is defined as hours for air, minutes for space, or nanoseconds for cyber. Air Force capabilities dominate the element of time by compressing the tempo of events and producing physical and psychological shock.

*Geographic range* of Air Force power capabilities enables the creation of effects across the globe. Range gives Air Force capabilities the ability to react quickly and refocus both globally and across a theater to changing demands. Numerous types of operations display the geographic range of Air Force power capabilities. A mission may consist of a bomber or a cyber attack launching from the United States to strike a target thousands of miles away—or of tankers extending the range of close air support assets supporting ground forces within a joint operating area. The ability to range gives Air Force power its unique capability to produce effects rapidly—any time, any place.

*Persistence* is the ability to deliver and maintain the desired effect at the time, place, and duration required by the joint force commander (JFC). Air Force power’s exceptional speed and range allow its forces to visit and revisit a wide variety of targets nearly at will. Examples of
persistent operations might include maintaining a continuous flow of materiel to peacetime distressed areas, constantly monitoring adversaries to ensure they cannot conduct actions counter to those agreed upon, assuring that targets remain out of commission, and denying an enemy resources and facilities or providing them to an ally during a specified time.35

*Payload* is the reason for being. Range and persistence are meaningless unless the payload can deliver the required effect. Every operation in air, space, and cyberspace is conducted to deliver effects from some type of payload, which might be a warhead, a computer virus, relief supplies, or a GPS signal. The payload is the “load” that consists of anything carried by an air, space, or cyberspace vehicle that delivers effects. Always, the goal is to have the right payload available at the right place at the right time to support fulfillment of the commander’s objectives.

**Airpower Concepts**

A well-developed Air Force strategy uses airpower in a way that maximizes the potential of its speed, range, persistence, and payload in order to realize the stated operational objectives. This section addresses various Air Force concepts, including both foundational ideas and the service’s enduring contributions.36 The descriptions here will prove useful in understanding how airpower applies to the region in the section below.

**Foundational ideas.** Captured in various vision documents from 1990 to 2000, these three concepts are Global Reach, Global Power, and Global Vigilance.37 In his book *In Service to the Nation: Air Force Research Institute Strategic Concept for 2018–2023*, Dr. John A. Shaud, former director of the Air Force Research Institute, recasts these three concepts, making them
more inclusive and bringing them closer to their original intent. It is important to understand these broad concepts before moving on to more specifics.

*Global Reach* is operational access that allows the use of Air Force capabilities to project power and enhance presence in a very short time, regardless of mission type or location. The service does not achieve Global Reach simply by means of air-mobility assets but does so through space-based lines of communication, a long-range-strike platform holding targets at risk, or a portal-to-portal Internet connection.

*Global Power* uses Air Force capabilities to create and sustain a full range of effects necessary to support national objectives throughout the spectrum of military operations. The service produces these effects through the integrated use of its capabilities during missions ranging from humanitarian relief to nuclear deterrence. The integration must occur within the Air Force itself as well as with joint partners and other instruments of national power. The synergistic use of Air Force capabilities enhances the ability to produce more discrete effects with more productive results in all five domains: air, space, cyberspace, land, and sea.

*Global Vigilance* provides awareness for understanding both the necessity for action and the types of effects needed to produce the set of conditions demanded by the commander’s objective. Global Vigilance underpins both Global Reach and Global Power by integrating the collection capabilities from all domains and the cognitive processes necessary to create situational awareness. It identifies linkages and assesses the potential for success as well as validates actual success or progress achieved through the application of Global Reach and Power. Global Vigilance depends upon Global Reach to gather data and disseminate intelligence.
These three foundational ideas supply the vision to guide development of any Air Force strategy. Not the purview of any one command or weapon system, they embody the essence of the integrated whole of Air Force power that unleashes the service’s potential to carry out a JFC’s objectives. Applying these concepts requires breaking them into the enduring contributions, which are then carried out though specific Air Force core functions and supporting capabilities.

**Air Force enduring contributions.** Five concepts describe the Air Force’s enduring contributions: domain control; responsive, full-spectrum ISR; rapid global transport; holding targets at risk; and building US influence.  

*Domain control* allows for Global Reach, Global Power, and Global Vigilance, enabling the successful accomplishment of all the enduring contributions. The Air Force has the assigned mission of gaining and maintaining the appropriate level of control of the air and space and, with other joint partners, of gaining and maintaining assured access to cyberspace. This control allows US and coalition forces to take advantage of unique capabilities in mobility, strike, and ISR, permitting surface forces freedom of action without the threat of adversarial attack from above.  

*Responsive, full-spectrum ISR* is the object of Global Vigilance, realized through Global Reach. It provides data turned into knowledge that allows for the effective use of Global Power. Responsive, full-spectrum ISR affords leaders an unparalleled decision-making advantage on which commanders rely—from supporting national strategic decision making to successful outcomes in life-and-death tactical situations.
Rapid global transport is evident in Global Reach, a form of Global Power. It supports and is supported by Global Vigilance. Through airlift, in-flight refueling, and global communications networks, rapid global transport offers decision makers options to deter and defeat aggression, project power, provide a stabilizing presence, conduct stability operations, and carry out humanitarian and other relief operations.

Holding targets at risk is one of the most visible elements of Global Power, made possible through Global Reach and supported by Global Vigilance. Holding targets at risk supports a range of joint missions, from deterrence to close air support. It involves conventional and nuclear capabilities launching from the United States or from within a JFC’s area of responsibility. This enduring Air Force power contribution gives national leaders a range of options for crisis response and escalation control.

Building US influence occurs when Global Reach, Power, and Vigilance are used to strengthen security partners and relationships. Air Force capabilities that support military engagement, security cooperation, and foreign humanitarian assistance aid in establishing, shaping, maintaining, and refining relations with other nations. The relationships built through these activities prior to a conflict’s outbreak can play an important role in gaining necessary allied support. Strong partnerships established on trust further the United States’ national and shared global security interests.

Applying the Concepts to the Asia-Pacific Region

The next step in developing a US Air Force strategy entails applying the concepts described above to the Asia-Pacific. The intent is to create specific ways to use airpower to reach the desired goal of strengthening regional political and economic stability via existing and
new international regimes. Achieving this goal requires a strategy that integrates all of the instruments of national power and that focuses on attaining the following objectives:

- Sustain deterrence and, if necessary, defeat aggression of any potential adversary
- Assure access to global commons
- Support growth of international organizations for conflict management
- Support continued expansion of economic interdependence

Determining the Air Force’s contribution to this integrated strategy involves using the five enduring contributions as a lens to analyze the situation and then recommending specific ways and means for reaching the stated goal. In line with the conclusions of the chapter on the most-likely path, the overall strategy for the Asia-Pacific includes two lead actions and three enabling actions.

**Lead Actions**

Lead actions are the enduring contributions that create effects directly linked to realizing regional objectives that produce a desired end state. Two lead actions achieve regional stability and enable the building of regimes: (1) ensuring the Air Force’s capability of holding targets at risk and (2) establishing US regional influence.

**Sustain Deterrence and, If Necessary, Defeat Aggression of Potential Adversaries**

The Air Force’s enduring contribution of holding targets at risk is vital to achieving deterrence, aiding in assuring access to the global commons, supporting economic interdependence, and defeating aggression if necessary. The US focus here is to deter hostilities since deterrence operations contribute to regional peace and stability, which in turn helps keep
the global commons open, which in turn allows for economic development and greater
economic interdependence. The Air Force contributes to effective deterrence through both
nuclear deterrence operations and conventional and cyberspace forces able to conduct global
precision attack. Carrying out nuclear, conventional, and cyberspace deterrence operations to
assure allies, dissuade proliferation, and deter potential adversaries supports not only the Asia-
Pacific region but also all of the geographic combatant commanders. If deterrence fails, the
ability to defeat an act of aggression quickly through the use of conventional strike and/or
cyberspace assets assures access to global commons and can contribute to the prompt return
of regional stability.

**Deterrence operations—nuclear.** Nuclear deterrence operations are the most critical
core function the Air Force provides to support US objectives. It is the most critical because
even though credible nuclear deterrence brings stability to the region, the loss of US extended
deterrence’s credibility would trigger nuclear proliferation by adversaries and allies alike,
creating a cascading situation of uncertainty, destabilization, and—in the worst case—the use
of nuclear weapons. The presence and possible use of nuclear weapons demand that conflict
escalation be factored into an Air Force and national strategy for the Asia-Pacific. Toward that
down, military leaders and politicians must communicate clear, unequivocal “red lines”
unambiguously understood by all parties involved. If the Air Force is to properly play its part in
these missions, it must maintain credible airborne (aircraft) and ground-launched-missile
capabilities.

To be convincing, any Air Force nuclear deterrent must include the ICBM and bomber
legs of the nuclear triad. The greatest issues reside with aging ICBM launch facilities and the
450 Minuteman III missiles. Much of this equipment reaches the end of its scheduled life span during this study’s timeline in 2020–23.\textsuperscript{44} Efforts are under way to extend the life of the ICBMs to 2020, possibly 2030, and of launch-control facilities to 2025, but no serious options have materialized for life-extension programs for these systems past these dates.\textsuperscript{45} In addition to the ICBM force, the Air Force’s nuclear-capable, long-range bomber force is facing modernization challenges. The current combination of 20 B-2s, 76 nuclear-capable B-52Hs, and associated weapons provides an adequate nuclear strike force to support nuclear deterrent operations through 2020. However, even with planned modernization, we have serious concerns about the ability of these systems to continue as a legitimate part of the nuclear deterrent family of systems in 2025 and beyond.\textsuperscript{46}

In a highly contested nuclear environment, the Air Force would look to its most capable bomber—the B-2. Although the B-2 is young compared to the B-52H, its 1980s stealth technology will make it less survivable in future contested airspaces.\textsuperscript{47} In addition to the B-2’s aging stealth effectiveness, the small number of airframes limits the aircraft’s ability to provide persistence, restricts the amount of total available payload, and puts survivability at risk because all aircraft are located at one base. To make up for the relatively small number of B-2s, the Air Force relies on the more numerous but lower-penetrating-quality B-52Hs. Since it first deployed in 1961, the B-52H has gone through constant modifications that have made it a very effective weapons-delivery platform expected to stay in the Air Force inventory into the 2040s. Regular updating has improved the aircraft’s avionics as well as its communication, offensive, and defensive systems; however, no update can significantly change the size, radar cross section, or speed of the aircraft. Without heavy support from other conventional or nuclear-
capable assets, the lack of stealth and speed makes the B-52H vulnerable in a highly contested antiaccess environment.

An aging, ineffective nuclear deterrent force—either perceived or actual—loses its deterrent value. Such a situation may embolden a potential adversary such as China or Russia and cause a loss of confidence in various US-led security arrangements with regional partners such as Japan, Korea, and Australia. Such a loss may motivate a country to develop its own nuclear force capability or realign its national policies with other nations in the region.48

**Deterrence and global attack operations: Conventional and cyberspace force.**

Conventional and cyber forces able to conduct global precision attack have a dual purpose in relation to the concept of holding targets at risk. These forces provide nonnuclear ways and means to conduct conflict deterrence in the Asia-Pacific as well as the more likely form of military force used to defeat aggression. Both deterrence and the use of force against aggression help assure access to the global commons and create stability that promotes economic growth and the potential for economic interdependence.

*Conventional forces.* For the Asia-Pacific region, the B-1, B-2, and B-52 weapon systems are best suited to meet the conventional deterrent needs of a JFC. These systems can overcome the long distances and lack of land-based military airfields; furthermore, if necessary, they can penetrate sophisticated antiaccess systems with enough payload and persistence to hold strategic targets at risk. For the time period of this study, these long-range bombers are sufficient to meet conventional deterrence needs. However, the concerns described earlier for the use of the B-2 and B-52 for the nuclear deterrence mission remain the same for their employment in the conventional deterrence role. B-52s’ ability to penetrate sophisticated air
defenses without significant support remains doubtful, and the aging stealth capability and meager numbers of the B-2 raise concerns. The B-1 bomber’s capabilities are better suited for the current demands of the Asia-Pacific. That aircraft’s higher speed and lower radar cross section make it more survivable than the B-52; moreover, the larger number of airframes (65 total aircraft) offers more payload and persistence capability to a JFC than the B-2. However, like its other bomber counterparts, the B-1 faces age-related issues. In 2003 the Air Force retired 33 B-1 aircraft to free up money for upgrades to extend the service life of the remaining fleet. In addition, as of 2012 the Air Force plans to spend “$191.4 million in modernizing the B-1 to prevent obsolescence and diminishing manufacturing sources issues and help sustain the B-1 to its approximate 2040 service life.”

By 2020 the utility of these conventional aircraft will begin to decline, and the Air Force will need to invest in and field new long-range-strike capabilities. Fielding this family of capabilities is critical and must not be derailed by budget constraints. Other cuts to Air Force programs, including reduction of the programmed number of the F-35 purchase, should be considered before cuts to the long-range-strike program. Development of long-range-strike systems must focus on the expected mission and the ability to produce certain effects. Given that understanding, then the decision on the type of platforms and weapons that make up the family of systems takes care of itself. For example, the need to assure nuclear surety and to hold targets at risk deep in the interior of a country makes a manned penetrating bomber the best option for nuclear deterrence operations. For conventional strike missions, long-range, stealthy, high-speed standoff munitions delivered from less expensive platforms can attain a JFC’s desired effect.
In addition to their use in deterrence operations, conventional strike and—potentially—cyber assets are the primary military means of defeating aggression should deterrence fail and some type of armed conflict occur. Most likely, these assets will be a part of a combined and joint operation to suppress small-scale skirmishes over boundary disputes if international regimes fail and if US treaty or other obligations are invoked. We could also call upon these capabilities in a major combat operation in places like the Korean Peninsula. In light of the possibility of unplanned conflict escalation, we must carefully weigh any conventional strike operation that could result in a force-on-force confrontation between the United States and any major regional power. Escalation control must be factored into operations since the most worrisome scenario requiring conventional Air Force strike operations is support of an ally involved in a maritime territorial dispute with China. Although the likelihood of major combat operations is low, we cannot rule them out. The Air Force must be ready to conduct such operations if necessary.

If the United States has to engage in combat operations during the time frame considered by this study, both the bombers discussed above and the fighter force are fully capable of conducting strategic attack, interdiction, or close air support. The modernization of the fighter force with the fifth-generation F-35A will enhance the Air Force’s conventional strike capability when it reaches initial operational capability toward the end of this study’s time frame. The F-35’s stealth, sensor package, and integrated avionics provide a lethal and survivable strike capability. This aircraft is not only critical to modernization of the US fighter force but also essential to key allies’ force-upgrade plans. Currently the F-22 adds a highly survivable strike capability to the fighter mix. Its stealth, supercruise, and maneuverability make
this platform well suited to penetrate highly defended airspace and accurately strike assigned targets. Major issues affecting the use of all fourth- and fifth-generation fighters include their reliance on air refueling to extend their geographic range, their small payload capacity, and in some cases the total number of airframes available, which limits persistence. Basing is a critical factor in minimizing the negative impact of these three issues. Options that provide basing near potential areas of operation for fighter forces reduce transit distance to and from targets, thereby lowering the need for tanker support, maximizing the available sorties during each 24-hour period, and effectively increasing payload and persistence.

**Cyberspace attack capabilities.** The speed, range, and payload of cyberspace attack capabilities are quite capable of overcoming the Asia-Pacific’s vast distances, basing issues, and antiaccess/area-denial concerns within the physical domains. The fact that cyberspace attack can hold targets at risk from strategic to tactical levels makes it suitable for deterrence and strike operations.

In their deterrent role, cyberspace attack capabilities complement nuclear and conventional deterrent capabilities. Although cyber offers a credible threat against elements of national power to deter aggression, it does have limits, compared to nuclear and conventional forces. These limits include the ease of defending against a cyber attack, the lack of cyberspace targets in an underdeveloped country, the inability to precisely communicate intent due to the nature of cyber attacks, and the difficulty of rendering a victim state completely unable to respond. Understanding these limits enables a JFC to effectively integrate cyberspace attack capabilities with those of other nuclear and conventional forces, producing a coherent overall deterrent strategy. If deterrence fails, cyberspace attack can independently—or in support of
other military capability—strike at targets to defeat aggression. Military networks, databases, and other electronic equipment, as well as civilian infrastructure that supports military operations, are possible targets.

Over the next seven years, the Air Force must continue to develop the organizational structures and processes to integrate cyberspace attack capabilities into operational plans for the Asia-Pacific. This is critical since a variety of government agencies are involved with the development and use of cyberspace attack. Further, the fact that private corporations own much of the means of carrying a cyberspace attack payload further complicates the use of this capability. The Air Force must become proactively involved with all partners to help design the appropriate laws and policies governing the potential use of cyberspace for military activities.

**Building US Influence in the Asia-Pacific Region**

The second of the two lead actions that the Air Force must take to realize overall US objectives is crucial to the outcome in all three paths. That is, Air Force efforts to build partnerships with foreign countries are no longer optional but necessary. Establishing US influence in the Asia-Pacific region is essential to maintaining access to global commons, strengthening economic interdependence, and, if necessary, helping to defeat aggression. Strong regional partnerships enable regional access and international cooperation to keep global domains open if contested, promoting economic growth and interdependence through regional stability. If conflict does occur, such relationships secure allied or partner basing, logistical support, and combat forces to defeat aggression. Building partnerships comes through interaction with regional governments, militaries, and populations. Such interaction occurs through military engagement, security cooperation, and foreign humanitarian assistance.
The US military already uses exercises to develop regional partnerships. In 2011 US Pacific Command participated in 172 multilateral and bilateral exercises with 24 countries in the region and plans to increase the number and size of these events in the Asia-Pacific. These exercises range from joint military activities to enhance extended deterrence, interoperability, and the readiness of alliance forces in places such as South Korea and Japan, to counterterrorism training in the Philippines, to talks on establishing a hub of regional humanitarian and disaster-relief efforts in Thailand.

The alliance with Australia has evolved from a Pacific partnership to an Indo-Pacific one. The two countries' political and military leaders are considering an increased combined naval presence and capabilities to respond more readily to humanitarian disasters, improved Indian Ocean facilities, and expanded training exercises for amphibious and land operations.

To achieve optimum levels of multinational cooperation in these partnerships, the Air Force must help determine what combination of military advice, technical assistance, and weapons sales will best help each country in the region. Consequently, the service must integrate its efforts into an overall joint military plan that supports a whole-of-government strategy to build regional influence. The partnering strategy must proceed from the premise that the interaction will benefit the needs and desire of all parties involved. The relationship should follow regional engagement guidelines articulated by organizations such as ASEAN, honoring nonalignment principles where appropriate, and should recognize existing United Nations practices, international laws, and guidelines common to the members of that organization. These partnerships should not be built on zero-sum terms—that is, a partner nation should not have to relinquish other relationships deemed important to its national
interests in order to enter into a relationship with the United States. No US partnering relationship should be presented as a loss for other major regional actors (e.g., either China or Russia).

As part of the transitional leadership strategy, the key involves establishing interrelationships, economic interdependence, and regimes and norms that reflect peaceful conduct and resolution of disputes. Doing so demands fully cooperative engagement by the United States in a manner that does not lead to nations having to “choose sides.” Building such a partnering strategy calls for flexibility and, at times, patience on the part of the United States—flexibility because relationships will vary from bilateral to multilateral arrangements and patience because some partners are comfortable with the current level of activity in the defense relationship and may not be ready to move into new areas as quickly as the United States.

Military engagement and security cooperation with Japan, South Korea, Australia, Thailand, and the Philippines are strong and must continue. Expanding programs such as RC-135 Rivet Joint shared operations with these countries and others in the region will strengthen relationships and interoperability. The United States must not back away from assuring partners—and this includes Taiwan—of its willingness to defend them from unprovoked aggression. Additionally, we should pay attention to expanding interaction with countries that in the past have resisted significant contact. These countries include but are not limited to China, Russia, Vietnam, India, and Indonesia. With the exception of Russia and China, US partnership relationships should emphasize the following:

- Increasing the general professionalization of military education and training
• Developing the capacity of the armed forces to cooperate in international coalitions

• Conducting training in the area of military law and justice

• Helping the military develop skills to combat threats to the nation and to support civil military operations. These skills could include search and rescue, support of international relief, stability and peacekeeping operations, strategic communications, coordination and support of relief and humanitarian organizations, combined operations in both civil and military situations, and combating transnational terror and crime.

• Within proper parameters, conducting foreign military sales to enhance strategic relationships55

Relationships among the United States, China, and Russia could benefit from the items presented in the list above; however, US military engagement with these two countries seeks to improve communications and understanding with each country’s military—not necessarily to develop capacity. Improved interaction builds trust and reduces the chance of taking action based upon a miscalculation of intent—an important factor in all three paths examined by this study. Here, military engagement should consist of military education and training exchanges as well as exercises and actual combined operations focused on confronting regional challenges such as disaster-relief operations and combating the alarming levels of illegal trade in timber, wildlife, and illicit drugs by sophisticated transnational criminal networks.56

**Enabling Actions**

This section addresses three contributions of Air Force power that enable the success of the two lead actions, which are necessary to address challenges along the three paths. The
enabling contributions provide the means of supporting the creation of effects that build US regional influence or hold targets at risk, thus helping to reach the desired end state.

**Rapid Global Transport in the Asia-Pacific Region**

Rapid global transport in the region is essential to a JFC’s ability to conduct operations and build US regional influence, which contributes to attaining the desired end state. Such transport provides the airlift, air refueling, and communications / computer network infrastructure to produce desired effects across the vast distances of the Asia-Pacific theater. Airlift offers vital support to deterrence and strike operations by moving and supporting personnel and equipment needed to conduct these missions. It also helps establish US influence by providing disaster relief and other supplies to regional nations in need. Air refueling enables nuclear and conventional deterrence as well as the ability to strike targets to defeat acts of aggression by extending the range and increasing the persistence and payload of strike assets. Global and regional cyberspace networks provide communication and computer capabilities that send and receive data, information, and knowledge payloads. These cyber payloads enable deterrence, strike, and influence missions through a variety of means, such as command and control (C2) functions as well as planning and targeting information.

The military configuration of the region makes the combined employment of airlift and cyberspace capabilities especially useful for military engagement opportunities there. Many of the smaller nations with which the United States should strengthen partnerships have air forces with limited capabilities, especially airlift and communications / computer infrastructure. Current and potential regional partners could benefit from the US Air Force’s knowledge in the areas of airlift and cyberspace infrastructure that supports communications and computer
networks. In addition, nations are more inclined to grant access to global transport aircraft. Greater access shows American presence and helps build influence.

Over the next seven years, forces used for air refueling and airlift will be well equipped to conduct missions in the Asia-Pacific region. The C-5M and C-17 provide the payload and strategic reach necessary to support US operations. Further, the C-130 J/H supplies critical intratheater lift to shift personnel and equipment throughout the region to support contingencies. Vast over-water distances in the region and the Air Force’s increasing dependence on short-range strike aircraft make the KC-135 and KC-10 air-refueling fleet a critical asset—one that could experience severe stress if multiple contingencies occurred simultaneously. We might be able to alleviate this stress by exploring opportunities for contract air refueling for missions in the continental United States, freeing tankers for other global missions.57

Beyond 2020, modernization issues exist for some of these capabilities. The KC-46A is the new tanker under development to replace the aging KC-135 fleet. It is vital to the Air Force that development of this new tanker remain on time because any significant delay threatens the viability of the most important enabling capability for a US strategy reliant upon the Air Force’s global prowess. Even theater-level capabilities are threatened. If major strike operations are needed, the limited number of Air Force long-range-strike assets makes basing and refueling issues critical to mission accomplishment. Along with keeping the KC-46A procurement on time, the Air Force must continue to expand the overall procurement numbers. Presently the service has funds to buy 179 KC-46As, with all aircraft delivered by 2028.58 These new tankers replace only about 40 percent of the KC-135 force and 35 percent of
the combined KC-135/KC-10 tanker fleet.\textsuperscript{59} Even with these additions, the Air Force’s air-refueling capability would not meet the stated requirement for two of the three scenarios used in the \textit{Mobility Capabilities and Requirements Study 2016}. Replacing the aging tanker force must remain the Air Force’s number-one acquisition priority. In addition to modernizing the tanker fleet, research and development must continue to develop capabilities for remotely piloted air-refueling options. Moreover, modernization of the strategic airlift fleet must continue—specifically, conversion of the C-5 fleet to 52 C-5Ms—and work must begin on the early analysis and research of a new strategic airlift aircraft. Although the 223 C-17s are among the newest aircraft in the Air Force’s inventory, they have seen higher-than-expected utilization rates supporting operations in Iraq and Afghanistan.\textsuperscript{60} This increased wear and tear will shorten the planned life expectancy of the C-17, requiring a replacement aircraft sooner than anticipated. This analysis and research effort should include looking at the feasibility of using remotely piloted aircraft and lighter-than-air vehicles for air-distribution needs.

Keeping up with the rapid pace of technology and the skill sets needed to create and employ cyberspace communications and computer networks is a constant challenge and an issue that will continue throughout the time frame of this study and beyond. The Air Force is working hard to create a skilled, technical workforce through collaborations and partnerships with academic institutions as well as established, deliberate processes for training, continuing education, and certification of cyberspace professionals.\textsuperscript{61} However, these highly skilled individuals are in demand outside the Air Force, so retaining/growing this precious pool of expertise is problematic.\textsuperscript{62} In addition, rapid upgrades to hardware and software challenge the service’s ability to maintain standardized joint acquisition of systems to create both rapidly
delivered and fully interoperable cyber network capabilities. Further complicating this issue, Air Force network systems must also work with our partner nations to conduct combined operations ranging from humanitarian assistance and disaster response to territorial defense.

**Responsive, Full-Spectrum ISR in the Asia-Pacific Region**

To enable operations that give decision makers the essential intelligence they need to make accurate and timely decisions, we must have responsive, full-spectrum ISR in the Asia-Pacific region. Decision superiority allows commanders to deter conflict by demonstrating the ability to hold targets at risk and, when deterrence fails, to conduct strike missions alongside partner and allied nations, strengthening relationships with all who contribute to achieving the desired end state. Establishing responsive, full-spectrum ISR for the Asia-Pacific requires conducting and synchronizing surveillance and reconnaissance assets across global, theater, and tactical levels throughout all domains. The Air Force must integrate its air, space, and cyberspace surveillance and reconnaissance assets with other land and naval assets and, at times, with those of our international partners and allies.

The Air Sea Battle initiative offers a framework to identify and develop integrated structures and processes that leverage space and cyberspace assets as part of the overall mix of ISR capabilities with joint, coalition, and interagency partners to develop required capabilities for the joint fight. The sharing of classified intelligence information with coalition members presents problems during any type of operation. One must strike a balance between protection of national secrets and the need for effective mission planning and execution. Overcompartmentalization of classified information hurts vertical and horizontal integration by limiting the distribution of information needed for mission accomplishment. This issue can
negatively affect the establishment of trust among allies during operations—trust that may otherwise have strengthened partnerships. US information security policies should give a commander flexibility to share information based upon mission needs. Furthermore, information systems such as the Combined Enterprise Regional Information Exchange System should provide for coalition information exchange at the Secret-releasable level. This network should offer a common operating picture, e-mail, web dissemination, and full collaboration capability within the network domain.

In addition to strengthening ISR integration, the Air Force must develop a more balanced and survivable mix of airborne platforms to enable ISR operations. Recent heavy investment in MQ-1 Predator and MQ-9 Reaper remotely piloted aircraft and the MC-12 Liberty has greatly improved ISR capabilities. These assets are perfect for supporting the desire to develop influence in the region by helping partners combat terrorism and transnational criminal networks, respond to disasters, keep an eye on borders, patrol lines of communication, and conduct counterpiracy operations. For these roles, partner nations likely will permit basing support, negating the lack of range for these assets. However, if deterrence fails and armed conflict occurs, then these assets may lose their ability to operate effectively in a contested environment. In addition, during strike operations, basing access may be limited, thereby putting these assets out of range due to the lack of air refueling. The Air Force must continue to invest in all-weather, wide-area surveillance platforms—including space assets focused on the region as well as upgrades to the U-2 and the Global Hawk—and begin research for a follow-on airborne wide-area surveillance platform. Moreover, integration of the sensor capabilities of the F-22 and F-35 into theater ISR systems will greatly enhance theater awareness over time.
Domain Control in the Asia-Pacific Region

Designated the lead service for control of the air and space domains, the Air Force also has joint responsibility for the cyberspace domain. Securing the high ground of air and space and the electromagnetic spectrum that defines cyberspace enables freedom of action for joint and coalition military operations as well as civil and commercial activities. At the appropriate degree for operational objectives, domain control is a critical prerequisite for all operations and an enabler to attaining this path’s end state.

The ways and means of gaining control of a domain are not exclusive to that domain. For example, assets used for that purpose may come from the cyberspace, space, maritime, or land domains. Computer network attack (CNA) against an adversary’s air defense system can enable strike operations. At the same time, space assets can pass information to Navy Aegis cruisers, enabling them to conduct integrated missile defense while F-22s, enabled by space-based GPS and the cyber-degraded air defense system, can fly offensive counterair missions against enemy airfields. The effective control of one domain relies upon control of other domains.

This integrated understanding of domain control must become part of an Asia-Pacific strategy. Air Force elements needed for such an integrated strategy include integrated joint C2; secure, reliable networks; space assets that provide responsive situational awareness; communications and navigation; air-breathing strike and ISR platforms to conduct offensive and defensive counterair missions; adequate land basing; and air refueling. Efforts under way with the Air Sea Battle construct should help build such an integrated strategy leading to air, space,
and cyberspace superiority. Domain control has a symbiotic relationship with other types of operations: it enables all operations, and all operations contribute to its accomplishment.

Major obstacles to gaining and maintaining domain control through air, space, and cyberspace superiority operations in the Asia-Pacific region include basing, recapitalization/modernization of space and fighter assets, and cyberspace network attack and defense. Gaining access to land basing is essential due to the maritime nature of the region and the short range of fighter aircraft in comparison to the size of the region—hence the importance of developing partnerships there. One of the US goals for partnering is to obtain access to basing for the purpose of conducting air superiority missions in potential conflict areas. Rather than build large, permanent US-controlled bases, the United States only wishes to rotate forces through a location for developing partnerships and interoperability and for gaining specific situational awareness in the region. A more detailed discussion of basing strategy occurs later in this chapter.

The current mix of fighter aircraft is sufficient to conduct air superiority missions across the range of military operations in the Asia-Pacific for the next seven years—as long as we can position them sufficiently close to their required locations and as long as the legacy fleet continues to receive upgrades to respond to increasingly modern threats. Currently the F-22’s ability to conduct counterair missions is unmatched. The platform’s effectiveness continues to increase as the Air Force gains operational experience through deploying it to the Asia-Pacific region. Once operational, the F-35 will significantly improve the Air Force’s counterair capability; however, only small numbers will be operational by the end of this study’s time frame. As a result, the Air Force must rely on its legacy fighters to supplement the next-
generation aircraft and to provide sufficient assets to generate the payload and persistence of operations needed to cover the vast Asia-Pacific region. As antiaccess threats continue to improve in range and lethality, upgrades to legacy fighter systems must continue. These upgrades include programs already under way, such as those to extend aircraft service life, aircraft radar and sensor upgrades, improvements to air-to-air munitions, select electronic-warfare enhancements, and refinement of training capabilities and training-range equipment.65

Budget constraints have slowed the pace and scope of the modernization of space forces, causing the Air Force to concentrate its investment on programs critical to joint force success. One such focus area must be space programs needed to conduct domain-control operations, including fielding new satellite communications systems; replacing legacy early missile warning systems; improving space-control capabilities; upgrading position, navigation, and timing capabilities; and conducting space launch.66 Two Asia-Pacific nations have demonstrated antisatellite capabilities. The United States can mitigate this capability through a space-defense-in-depth strategy, but it must have reliable launch so that it can replace disabled satellites.67

The ability to operate in cyberspace is essential to an integrated strategy of domain control. Cyberspace is a network of interdependent information technologies, including the Internet, telecommunications networks, computer systems, and embedded processors.68 Armed with an understanding of the growing threat to and our dependency upon cyberspace, the Air Force is increasing the network’s defensibility by creating the AFNet Migration and applying a “defense-in-depth” alignment.69 AFNet Migration turns the current dispersed, installation-managed network architecture into a single, homogeneous, and centrally managed
Air Force network: “Migration to a single architecture provides the opportunity for Air Force-wide network situational awareness—an awareness that enables robust, defensible and trusted air, space, and cyber operations.”

In addition to the network-migration initiative, the Air Force must continue to move from a reactive to a proactive cyberspace defensive posture. The service can do so by continuing to expand its small number of teams that seek out friendly network vulnerabilities. The proactive network probing by Air Force cyberspace professionals will eliminate problems with cyber domain control before an adversary can exploit them. Proactive defense also reduces the need for reactive human-in-the-loop processes. The Air Force must continue to invest in automated sensors that will recognize and repel network attacks as they happen. Although no defensive measures can make cyberspace completely safe, adopting a proactive approach will increase the Air Force’s ability to maintain control of this domain.

Finally, offensive use of the cyberspace domain can assist in domain control. CNA capabilities can control the cyber domain by denying an adversary’s use of the cyber domain and can deny, disrupt, or destroy capabilities used to help control other domains. Pacific Air Forces must work with other appropriate agencies to operationalize and integrate CNA capabilities into campaign plans by reducing the excessive security compartmentalization of CNA methods. A commander who does not become aware of an effective CNA means until a crisis occurs is unlikely to use that capability. Prior familiarity with a capability fosters understanding, which gives a commander and staff confidence that the means will deliver the desired effect.
Basing Approach in the Asia-Pacific Region

The desire to base Air Force assets close to a potential area of conflict must be balanced with the threat to the base as well as the political climate of the host country that determines use of the base for a specific operation. Thus, to provide flexibility for operations, the basing approach for the Asia-Pacific relies upon a three-tiered construct: (1) US-based global power projection and deterrence, (2) outer regional presence for regional power projection and staging, and (3) inner regional presence for engagement, influence, and—if required—close combat. The three-tiered basing approach is designed to support US objectives by supplying the infrastructure necessary to support operations to deter conflict, respond to contingencies involving the global commons, defeat any aggression, and provide stability to encourage economic growth and interaction.

The first tier of basing resides in the United States itself. Long-range operations from America can support deterrence, global strategic attack operations, and rapid global mobility. They also offer reachback capability needed to support any mission conducted across the five enduring contributions.

The second tier consists of bases in the Asia-Pacific region that lie outside the range of the greatest area-denial threats. These bases should be located only in countries that are strong US allies, such as Australia; in British territory such as Diego Garcia; and in US territories such as Guam and the Northern Mariana Islands. These locations would provide the greatest guarantee of host-country political support, ensuring base usage for any anticipated operation. Bases in the second tier must have well-developed infrastructure to support the full range of Air Force missions contributing to all five of the service’s enduring contributions. These bases should
primarily consist of US-run facilities but also should include host-nation facilities through which US forces rotate as part of a standard deployment schedule.

The third tier of bases consists of current permanent locations (Japan and South Korea) as well as present and future expeditionary locations close to expected operating areas. The permanent bases in Japan and South Korea will need the same infrastructure as the second-tier bases, together with substantial hardening and defensive capabilities—but most third-tier bases will not be hardened. These operating bases should include Central and South Asia as well as the greater Asia-Pacific region. The primary objective of third-tier basing is to show presence, develop working relationships with our partners, be prepared to aid in times of disaster, and—if needed—project appropriate forms of power with the ability to disperse assets. Although the survivability of these bases would be at risk during a major combat operation, their value in terms of regional influence outweighs that risk. The goal is not to build more permanent, US-run third-tier bases in our partner nations throughout the region because doing so would likely be seen as a threat to regional powers, possibly contributing to regional instability that would adversely affect achievement of the desired end state. This study envisions these bases having as their primary missions humanitarian assistance, disaster response, civil search and rescue, intelligence gathering, surveillance and reconnaissance, development of partnership capacity, airlift, air refueling, logistical support, and C2. Locations for the potential expeditionary bases include countries such as Singapore, Thailand, Philippines, Australia (the Cocos Islands), Vietnam, Indonesia, Malaysia, Brunei, and India.72
Command and Control of Air Force Forces in the Asia-Pacific Region

Effective C2 of Air Force operations remain essential to success in the expected, dynamic Asia-Pacific operating environment, both now and in the future. Over the next seven years, the Asia-Pacific region will challenge military forces with threats and opportunities across the range of military operations, extending from relief and reconstruction in crisis zones, to cooperative engagement in the global commons, to small-scale conflicts over territorial disputes, to least likely but always possible large-scale major conflict. Integration across such a wide range of missions stresses the need for the Air Force to adjust its C2 structures to a more adaptive C2 approach for Air Force operations built upon unified action that leads to unity of effort. Adaptive C2 of Air Force capabilities places decision authority at the most appropriate level of command, achieving agility and speed of action in delivering effects. Creating unity of effort through horizontal collaboration built on mutual trust among war-fighting partners rather than a primary emphasis on traditional vertical interaction in the military hierarchy is critical. The design for realizing the goal of adaptive C2 will vary from situation to situation. At times, the lowest level is national command, such as nuclear deterrence and some cyberspace operations. Other times, effective operations necessitate the presence of commanders having decision-making authority, possessing the required information, and interacting at organizational levels below the most senior commander—individuals who can provide optimal span of control, unity of command, and tactical flexibility. These operations also warrant distributing planners and control elements to appropriate partners’ echelons and giving them information access and the authority to make decisions. A disaster-relief action led by a joint task force (JTF) exemplifies such an operation. A commander should consider six key variables.
when determining the lowest appropriate level to place C2 nodes: (1) the nature of the operation, (2) the capacity of available resources versus the requirement, (3) the capabilities of subordinate units, (4) the degree of trust and confidence among partners, (5) the political risk, and (6) the desire to exploit interaction among the speed, range, persistence, and payload of Air Force capabilities. Considering these six variables within the context of a specific situation will assist a commander in creating a C2 design with the proper balance of centralization versus decentralization.

The Air Force should make adjustments to its current C2 structure that will allow the service to become more adaptable and better prepared to support the full range of military operations expected in the Asia-Pacific region. At present, the structure is optimized for global and theater-level missions such as major combat operations on the Korean Peninsula or with a peer adversary such as China or Russia. More probably, however, the Air Force will use its capabilities in this region for smaller-scale contingencies led by a JTF. This likelihood creates a problem for the Air Force because, other than through ad hoc means, its C2 structure is not fully organized, trained, or equipped to provide C2 nodes in support of JTF-led operations. To overcome this lack of adaptability, the service must address several issues in order to create a more scalable C2 structure. First, it must broaden Airmen’s understanding of the concept of centralized control, the mainstream Air Force interpretation of which holds that centralized control of its capabilities occurs only through the command of a senior Airman at the combatant commander level, supported by centralized planning. This limited understanding of the concept creates resistance to change. Airmen must grow to understand, as they once did, that establishing an Air Force commander with appropriate command authorities at an echelon
below the combatant commander level or attaching Air Force forces to a JTF does not necessarily violate the doctrinal concept of centralized control. Once this barrier to understanding is removed, the next step is to create the scalable capability and capacity of a more adaptive C2 structure, including mobile command elements having the trained personnel, communications equipment, and planning tools to integrate Air Force capabilities into JTF operations. These units will promote effective integration and synchronization of the service’s capabilities with the joint mission, including aligning forces and establishing command authority—along with planning expertise—at the appropriate organizational level. The intent is not to replicate the full capabilities resident within current air operations centers. Mobile command elements need the proper people, equipment, and processes and procedures established to reach back and rely on the theater air operations center to produce the air tasking order, integrate theater and global assets, and provide airspace control measures. Developing a scalable C2 structure not only will optimize Air Force C2 for the Asia-Pacific region but also will help all of the service’s operations worldwide. Because this is a servicewide need, the Air Force should develop an integrated set of defined planning, programming, and budgeting requirements, thus eliminating redundant efforts in different Air Force commands.

Conclusion

Asia’s future path remains uncertain. It may evolve along a path toward peaceful cooperation or one that leads to confrontation and war. Most likely, it will follow a route somewhere between these extremes. As it does so, there are things we know.

Asia will continue to evolve largely along its current path. China’s and Asia’s rise will continue. Over the next 10 years, China will not overtake the United States in overall power or
military power, but it will likely pass us in total GDP and will certainly exert strong influence in the Asia-Pacific region. Economic interdependence will grow, linking the economies of the region more closely and making warfare a more painful exercise for all than it would be today. If not properly managed, this rise of China will persist in inducing unease in the region. Further, if China cannot develop mutual strategic trust with its partners, it may well successfully contain itself completely. Regardless of China’s behavior, relations between the United States and its partners will be sensitive since Asian economies will be intertwined with China’s and none of our partners will want to be in the position of having to choose sides.

Developing an Air Force strategy for the Asia-Pacific that addresses the military-security needs of our partners without simultaneously jeopardizing their economic requirement is a complex and difficult undertaking. A successful strategy leverages appropriate Air Force capabilities in a way that attains stated objectives leading to the desired regional end state. The multifaceted strategy must contend with a broad spectrum of threats and a diverse set of nations and their interests. The strategy must be part of an integrated DOD effort that supports the overall national strategy for the region. To achieve the Air Force’s strategy is to deter conflict by having the capacity to hold targets at risk through integrated nuclear, conventional, and cyberspace deterrence operations; to continue to build and strengthen regional influence through military engagement, security cooperation, and foreign humanitarian assistance; and, when all else fails, to conduct global precision attack to stop aggression when it occurs.

To execute these lead actions effectively, the Air Force must be a transitional leader within the region. Specifically, it must lead from a position of strength and use that leadership to build partnerships and establish regimes which enhance freedom of navigation and
commerce. It must foster and continue economic integration, leading from a position of understanding and working within the cultures and governmental structures of the region. Finally the service must use its military might to conduct humanitarian-relief operations and disaster response to ensure that no single natural event derails the regional economy. To produce this outcome, the Air Force must continue its modernization efforts with long-range strike and the fighter force. The service must integrate cyberspace defensive and offensive operations into deterrence and strike operations as well as include measures to control conflict escalation into all operational plans as a means of preventing the inadvertent growth of conflict. The Air Force’s efforts to build regional partnerships must have a priority as high as that of its other mission areas. Partnerships develop trust, help align regional interest toward common goals, and provide access for US forces to conduct military operations when needed. The Air Force must create unified action through an integrated plan that guides the actions of all US government partnership stakeholders.

If the Air Force wishes to lead from a position of strength and with the reach necessary to maintain that strength, its strategy must also focus on global transport, full-spectrum ISR, and domain-control capabilities. To support operations throughout this large theater, the Air Force must continue to modernize not only the C-5M but also its air-refueling fleet with the new KC-46. In the domain of space, the service must continue focused investment on new satellite communications systems, replacing legacy early missile warning systems, improving space-control capabilities, and upgrading position, navigation, and timing capabilities. The Air Force must also develop a more balanced and survivable mix of airborne ISR platforms to enable operations in contested environments. The Air Sea Battle construct should be used to
develop an integrated domain-control strategy and to develop operational concepts that leverage space and cyberspace assets as part of the overall mix of ISR capabilities. In addition, the service must continue to reinforce the defense of its networks. Initiatives such as the AFNet Migration, defense-in-depth alignment, and the move toward a proactive cyberspace defensive posture are vital. These efforts will ensure a reliable network able to support the full range of military operations in the Asia-Pacific theater.

Finally, the strategy must be supported by a flexible basing strategy and scalable C2 structure. The recommended three-tiered basing plan enables global and regional power projection and deterrence, regional staging, and presence for engagement, influence, and close combat if required. Moreover, since operations in the Asia-Pacific region during this time period will serve a mixture of military and civil objectives, success in these operations demands the integration of capabilities from all government agencies, services, and coalition partners. Such integration stresses the need for the Air Force to adjust its C2 structures to a more adaptive C2 approach for Air Force operations built upon unified action that leads to unity of effort.

If these actions take place, then the Air Force will have successfully played its part in building partnerships across the Asia-Pacific basin—partnerships that will help strengthen the norms and regimes that help reduce the probability of conflict and lead to a greater likelihood of peacefully reconciling differences. Alongside other aspects of the President’s US pivot to Asia, this creates a set of circumstances that makes the “best case” path more likely and the “worst-case” path less probable. Most importantly, regardless of which path the Asia-Pacific region travels, it ensures that the US Air Force remains ready and able to handle any challenge that the future may hold.
Notes

2. Ibid., 81.
3. The Solarium study referred to the different cases as paths. Here, the terms path, case, and scenario are used interchangeably.
5. Schwartz, Art of the Long View, 114–15. Schwartz defines a predetermined element as a feature seen to occur across the multiple scenarios. Features that appear regardless of the path the world is on are thus predetermined and should be treated as inevitable.
6. Ibid.
7. John Mearsheimer, The Tragedy of Great Power Politics (New York: W. W. Norton, 2001), 65, 426n30. In addition to discussing the idea that GDP is not the sole measure of national power, Mearsheimer addresses the concept of latent versus actual power. Nation-states that are largely agrarian and not industrialized cannot translate as much of their GDP to national power as can those states whose industrial capacity is more advanced.
10. International Monetary Fund, World Economic Outlook: Hopes, Realities, Risks.
12. Ibid.
15. “Asia’s Defense Spending Overtakes Europe’s.”
17. China’s official policy is to maintain relatively few nuclear weapons. However, the recent discovery of the “Underground Great Wall” with more than 3,000 miles of tunnels leads
to ambiguity regarding the size of the Chinese program and whether it is growing. Hui Zhang, “China’s Nuclear Weapons Modernization: Intentions, Drivers, and Trends” (presentation, Institute for Nuclear Materials Management, 53rd Annual Meeting, Orlando, FL, 15 July 2012). Data gathered during the study as part of researching the three paths leads to high confidence that the size of the arsenals in the states named is increasing.


22. In the dispute between the Philippines and China in 2012, China eventually had a minimum of 79 (some reports put the number at 105) vessels arrayed against the Philippine navy, including five Chinese destroyers. As this event spiraled to a level where both nations became worried about an accident or miscalculation, diplomatic efforts were started to unravel the tensions. See “Firepower Bristles in South China Sea as Rivalries Harden,” Times of India, 11 June 2012, http://timesofindia.indiatimes.com/world/china/Firepower-bristles-in-South-China-Sea-as-rivalries-harden/articleshow/14033349.cms; and Jamie Laude and Pia Lee-Brago, “Navy Monitors 79 Chinese Boats Near Shoal,” Philippine Star, 24 May 2012, http://www.philstar.com/article.aspx?publicationsubcategoryid=63&articleid=810116.


34. Within doctrine, the Air Force lists persistence as a tenet of airpower and speed and range as attributes. One should not read this section as if the authors are attempting to relabel or re-create doctrine; rather, the elements described here have the greatest impact on the vast Asia-Pacific region under study. Air Force Doctrine Document (AFDD) 1, Air Force Basic Doctrine, Organization, and Command, 14 October 2011, 14, 37, http://www.e-publishing.af.mil/shared/media/epubs/AFDD1.pdf.

35. Ibid., chaps. 2–5, p. 40.

36. The Air Force’s core functions are also important. Readers not familiar with these should consult ibid., 43–53.


38. Ibid., 98.

39. A number of documents with similar but varying titles describe enduring Air Force contributions: House, Department of the Air Force, Presentation to the Committee on Armed Services, United States House of Representatives, Fiscal Year 2013 Air Force Posture Statement,

40. Department of Defense Directive 5100.01, Functions of the Department of Defense and Its Major Components, 21 December 2010, 27, par. 2a; 28, par. 2h; 34, pars. 6b(2) and 6b(5).


42. Ibid., 13.

43. “Military engagement is the routine contact and interaction between individuals or elements of the Armed Forces of the United States and those of another nation’s armed forces, domestic or foreign civilian authorities or agencies to build trust and confidence, share information, and coordinate mutual activities. Security cooperation involves all DOD interactions with foreign defense establishments to build defense relationships that promote specific US security interests, develop allied and friendly military capabilities for self-defense and multinational operations, and provide US forces with peacetime and contingency access to [a host nation]. This includes activities such as security assistance. Security cooperation is a key element of global and theater shaping operations.” Joint Publication (JP) 1, Doctrine for the Armed Forces of the United States, 25 March 2013, I-15, http://www.dtic.mil/doctrine/new_pubs/jp1.pdf. Foreign humanitarian assistance is “Department of Defense activities, normally in support of the United States Agency for International Development or Department of State, conducted outside the United States, its territories, and possessions to relieve or reduce human suffering, disease, hunger, or privation.” JP 1-02, Department of Defense Dictionary of Military and Associated Terms, 8 November 2010 (as amended through 15 April 2013), 110, http://www.dtic.mil/doctrine/new_pubs/jp1_02.pdf.


46. Ibid.


54. Ibid.


Engagement in mutual operations requires integrated planning and programming. See Department of the Air Force, *Global Partnership Strategy*, 7 and Annex D. Achieving integrated planning across the potential partners is challenging. Pacific Air Forces is working this issue.


62. The Air Force Chief of Staff has asked the Air Force Research Institute to examine this particular issue in the institute’s next major study.


64. Ibid., 9.

65. Ibid., 11, 15.

66. Ibid., 19.

67. For an in-depth discussion of space defense, see Shaud, *In Service to the Nation*, 39.


73. This paper uses US joint military doctrine to define *command and control*: “The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. JP 1-02, *Department of Defense Dictionary*, 49.

74. The term *unity of effort* is defined as “coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization, which is the product of successful unified action.” The term *unified* action is defined as “the synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort.” *JP 1, Doctrine for the Armed Forces of the United States*, GL-13, GL-12.