

# Establishing Convergence in Multi-Domain Operations

A Monograph

by

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## Abstract

Establishing Convergence in Multi-Domain Operations, by MAJ Stuard J. Stegall, 52 pages.

In Great Power Competition, adversaries employ a variety of strategies and systems expanding the battlefield, challenging deterrence, and creating stand-off to separate joint capabilities, partners, and allies in time, space, and function. Multi-Domain Operations (MDO) is the US Army's core concept to adapt and modernize as part of the joint force in response to perceived changes in warfare. This monograph inquires how historical examples might assist the US Army in understanding the application of the tenets of MDO. This project aims to demonstrate that historical examples illustrate how politics guide the employment of domain capabilities in theaters of war, enabling convergence in wars of final victory and wars of limited aims.

This study uses a comparative case study methodology to demonstrate the establishment of convergence. The monograph evaluates the hypothesis through two criteria: political guidance and constraints on domain capabilities, and the application of domain capabilities across the theater of war. The research analyzes and synthesizes differences and patterns across Operation Iceberg from the Second World War and Operation Desert Storm from the Persian Gulf War. The study illustrates how initial political guidance constrained resources and the use of military force, limiting the employment of domain capabilities through time and space.

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## Abbreviations

MDO	Multi-Domain Operations
MIF	Maritime Interception Force
UN	United Nations
US	United States



## Section 1: Introduction

The reemergence of great power competition changes the character of modern warfare. China and Russia are actively competing against the United States (US) and its allies and partners.<sup>1</sup> China and Russia employ a variety of political and military strategies and systems, expanding the battlefield and challenging deterrence. These nations are creating stand-off separating allies, partners, and joint capabilities in time, space, and function.<sup>2</sup> To renew America's competitive advantage, the US military adapts to address perceived change in the character of modern warfare. The *Summary of the 2018 National Defense Strategy of the United States of America* outlines military objectives for the modernization of critical capabilities and the development of operational concepts to increase lethality and to retain a competitive advantage.<sup>3</sup> The military services are developing concepts to address the anticipated character of modern warfare.

The US Army is using Multi-Domain Operations (MDO) as the core concept to adapt and modernize as part of the joint force. MDO arranges tactical actions across all domains to deter and defeat the nation's adversaries in both competition and armed conflict.<sup>4</sup> This operational concept is a progression of the ideas outlined in *Multi-Domain Battle: Evolution of Combined Arms for the 21st Century*.<sup>5</sup> The name changed from Multi-Domain Battle to MDO because the

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<sup>1</sup> Donald Trump, *National Security Strategy (NSS)* (Washington, DC: The White House, 2017), 27, accessed October 4, 2019, <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-905.pdf>.

<sup>2</sup> US Department of the Army, TRADOC Pamphlet 525-3-1, *The US Army in Multi-Domain Operations 2028* (Washington, DC: Government Printing Office, 2018), v, vii.

<sup>3</sup> US Department of Defense, *National Defense Strategy* (Washington, DC: Department of Defense, 2018), 7, accessed October 4, 2019, <https://dod.defense.gov/Portals1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

<sup>4</sup> US Army, TRADOC Pamphlet 525-3-1, 17.

<sup>5</sup> David G. Perkins, "Multi-Domain Battle: Driving Change to Win in the Future," *Military Review* (July-August 2017): 6-12, accessed September 15, 2019, [https://www.armyupress.army.mil/Portals/7/military-review/Archives/English/MilitaryReview\\_20170831\\_PERKINS\\_Multi-domain\\_Battle.pdf](https://www.armyupress.army.mil/Portals/7/military-review/Archives/English/MilitaryReview_20170831_PERKINS_Multi-domain_Battle.pdf).

concept requires a joint force to achieve it across competition and conflict. Whereas the term “battle” is ground centric, the term “operations” implies a joint force.<sup>6</sup> MDO is the US Army’s creative solution to addressing the perceived change in the character of warfare.

Training and Doctrine Command (TRADOC) Pamphlet 525-31, *The US Army in Multi-Domain Operations, 2028* establishes the concept and how the US Army, as part of a joint force, will operate in a future conflict. The concept describes a threat-based approach across all domains, the electromagnetic spectrum, and the information environment that increases the effectiveness of forces and the complexity on the battlefield. The concept describes associated problems, key assumptions, and a basic framework to achieve this approach. MDO addresses how the US Army enables the joint force to compete below armed conflict, penetrate and dis-integrate anti-access and area denial systems to defeat adversaries in armed conflict and return to competition. A fundamental assumption of this concept is that future armed conflict will remain limited as neither side will employ nuclear weapons. Additionally, the concept’s framework identifies key tenets that makeup MDO: Calibrated Force Posture, Multi-Domain Formations, and Convergence.<sup>7</sup>

Fundamental to the concept is convergence multiple domain capabilities at the decisive space. Convergence enables the force to penetrate and disintegrate enemy anti-access and area denial systems to achieve freedom of maneuver.<sup>8</sup> “Convergence achieves the rapid and continuous integration of all domains across time, space, and capabilities to overmatch the enemy.”<sup>9</sup> Converging capabilities over multiple domains create cross-domain synergy and

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<sup>6</sup> US Department of the Army, “Contemporary Military Forum #8: Multi-Domain Operations,” US Army Professional Forum, October 15, 2018, video of conference, 1:42, <https://www.youtube.com/watch?v=JhmEVZRI-H0&t=300s>.

<sup>7</sup> US Army, TRADOC Pamphlet 525-3-1, A-1, 2, 15, 17.

<sup>8</sup> Ibid., v.

<sup>9</sup> Ibid., iii.

layered options to impose multiple dilemmas on the enemy.<sup>10</sup> Achieving convergence across multiple domains establishes conditions for operational freedom of maneuver of land forces.

The US Army concept of MDO, as it moves into doctrine, changes how the Army fights, organizes, and equips its formations. In the opening of *The US Army in Multi-Domain Operations, 2028*, General Mark Milley, makes a call to the force to study MDO and provide feedback to help inform the concept's evolution.<sup>11</sup> This monograph seeks to provide feedback through answering the question: How do historical examples assist the US Army in understanding the application of the tenets of Multi-Domain Operations? This project aims to demonstrate that historical examples illustrate how politics guide the employment of domain capabilities in theaters of war, enabling convergence in wars of final victory and wars of limited aims. As Carl von Clausewitz stated, "Historical examples clarify everything and also provide the best kind of proof in the empirical sciences."<sup>12</sup> This project will use the past to inform the future.

This monograph hypothesizes that political guidance and constraints are determinants in the employment of domain capabilities to achieve convergence in large-scale combat operations. This study uses a comparative case study methodology to demonstrate the establishment of convergence. The monograph evaluates the hypothesis through two criteria:

(1) political guidance and constraints on domain capabilities, and (2) the application of domain capabilities across the theater of war. The monograph imposes the criteria on two historical case studies: Operation Iceberg from the Second World War and Operation Desert Storm from the Persian Gulf War. This study defines political guidance and constraints as the allocation and application of resources politicians allow the military to use in achieving the military objective. Domain capabilities are the lethal and nonlethal capabilities across all five domains (air, land,

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<sup>10</sup> US Army, TRADOC Pamphlet 525-3-1, 20.

<sup>11</sup> Ibid., Forward.

<sup>12</sup> Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 170.

maritime, space, and cyberspace) as well as the electromagnetic spectrum and information environment.<sup>13</sup> The US *DOD Dictionary of Military and Associated Terms* defines air domain as “the atmosphere, beginning at the Earth’s surface, extending to the altitude where its effects upon operations become negligible.”<sup>14</sup> The dictionary defines the land domain as “the area of the Earth’s surface ending at the high water mark and overlapping with the maritime domain in the landward segment of the littorals.”<sup>15</sup> The dictionary defines the maritime domain as “the oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above these, including the littorals.”<sup>16</sup> The dictionary offers a similar definition for the space domain, “the area above the altitude where atmospheric effects on airborne objects become negligible.”<sup>17</sup> The document defines cyberspace as “a global domain within the information environment consisting of the interdependent networks of information technology infrastructures and resident data, including the Internet, telecommunications networks, computer systems, and embedded processors and controllers.”<sup>18</sup> The DOD dictionary defines the electromagnetic spectrum as “the range of frequencies of electromagnetic radiation from zero in infinity.”<sup>19</sup> The publication provides the following definition for the information environment, “the aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information.”<sup>20</sup>

This study applies the criteria in two different conditions, a war of final victory and a war of limited aims. Political objectives establish the military objectives, which determines the

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<sup>13</sup> US Department of the Army, TRADOC, *Multi-Domain Battle Evolution of Combined Arms for the 21st Century* (Washington, DC: Government Printing Office, 2017), 2.

<sup>14</sup> US Department of Defense, Joint Staff, *DOD Dictionary of Military and Associated Terms* (Washington, DC: Government Printing Office, 2018), 12.

<sup>15</sup> *Ibid.*, 137.

<sup>16</sup> *Ibid.*, 146.

<sup>17</sup> *Ibid.*, 213.

<sup>18</sup> *Ibid.*, 59.

<sup>19</sup> *Ibid.*, 75.

<sup>20</sup> *Ibid.*, 112.

military objective and the means at which to achieve it. Wars with absolute aims seek a final victory. In this type of war, nations completely mobilize their resources to force an unconditional surrender and complete disarmament of the belligerent's army. In contrast, wars with limited political aims constrain military means to achieve specific objectives.<sup>21</sup> Wars after 1945, typically remain limited to prevent the escalation of a nuclear exchange.<sup>22</sup> Both case studies, Operation Iceberg and Operation Desert Storm, political aims provided fundamental guidance in the application of domain capabilities in a theater of war to achieve convergence. The comparison of these case studies highlights the differences in achieving convergence of MDO during a war of absolute aims and a war of limited aims.

During the final months of the Second World War, US forces converged capabilities in the air, maritime, and land domains and the electromagnetic spectrum in Operation Iceberg during the amphibious assault of Okinawa.<sup>23</sup> From December 1941 to April 1945, politics constrained and guided the employment of domain capabilities in the Pacific, enabling convergence across multiple domains during the assault. As part of the Second World War, the case study illustrates the achievement of convergence in multiple domains during a war of final victory. This operation demonstrates the successful application of convergence in air and maritime domains as well as the electromagnetic spectrum and information environment during large scale combat operations.

In contrast, Operation Desert Storm offers a case study in which political guidance constrained the employment of domain capabilities in a war of limited aims. From August 1990 to February 1991, international and domestic politics guided the employment of capabilities in the

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<sup>21</sup> Clausewitz, *On War*, 81, 582, 75.

<sup>22</sup> Zachary L. Morris, "Emerging US Army Doctrine: Dislocated with Nuclear-Armed Adversaries and Limited War," *Military Review* (January-February 2019): 27.

<sup>23</sup> Gordon L. Rottman, *World War II Pacific Island Guide: A Geo-military Study* (Westport, CT: Greenwood Press, 2002), 432.

Persian Gulf War.<sup>24</sup> During the conflict, the US military with coalition partners leveraged capabilities across maritime, air, and space domains as well as the electromagnetic spectrum and information environment to expel Iraqi forces from Kuwait while restoring international boundaries. This conflict illustrates a war in which US forces can anticipate fighting in the future in which forces must operate within the political constraints associated with a limited war. The MDO concept implies fighting wars of limited aims. The concept describes a cycle starting in competition, winning in armed conflict, and returning to competition.<sup>25</sup> This case study better illustrates the type of war the United States has fought since 1945 and is likely to fight in the future.

Primary sources for Operation Iceberg case study include unit action reports and field orders from the 10th Army and subordinate units.<sup>26</sup> Additional primary sources include official service histories such as the US Army's *Okinawa: The Last Battle*, the Marine Corps' *Okinawa: Victory in the Pacific*; Haywood Hansell's *The Strategic Air War Against Germany and Japan*; and Earnest King's *The Official Reports to the Secretary of The Navy* which provide an in-depth analysis of the campaign.<sup>27</sup> Secondary sources such as Bill Sloan's *The Ultimate Battle* and Robert Leckie's *Okinawa: The Last Battle of World War II*, provide material to understand the

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<sup>24</sup> Richard W. Stewart, *War in the Persian Gulf: Operation Desert Shield and Desert Storm: August 1990–March 1991* (Washington, DC: Center of Military History, United States Army, 2011), 1.

<sup>25</sup> US Army, TRADOC Pamphlet 525-3-1, 46.

<sup>26</sup> US Army, 10th, *Action Report, Ryukyus, 26 March 1945 to 30 June 1945* (LaCrosse, WI: Brookhaven Press, 2002 [1945]), 1; US Army, Corps XXIV, *Report of the Okinawa Operation* (LaCrosse, WI: Northern Micrographics, 2002 [1945]), 1.

<sup>27</sup> Roy E. Appleman, James M. Burns, Russell A. Gugeler, and John Stevens, *Okinawa: The Last Battle* (Washington, DC: Center of Military History, United States Army, 1993), vii; Charles S. Nichols Jr. and Henry I. Shaw Jr., *Okinawa: Victory in the Pacific* (Washington, DC: Headquarters, US Marine Corps, 1955), vi; Haywood S. Hansell Jr., *The Strategic Air War Against Germany and Japan* (Washington, DC: Office of Air Force History, 1986), viii; Earnest J. King, *U.S. Navy at War 1941-1945: Official Reports to the Secretary of the Navy* (Washington, DC: US Navy Department, 1946), 3.

general context leading up to and during the operation.<sup>28</sup> Together these primary and secondary sources provide a foundation for a holistic understanding of Operation Iceberg.

For the Operation Desert Storm case study, primary sources include Richard Swain's "*Lucky War*" *Third Army in Desert Storm*. Swain, appointed as the Theater Army Historian, focused on Third Army and Central Command's Headquarters' role in the conflict.<sup>29</sup> Service histories serve as additional primary sources such as Frank Schubert's *The Whirlwind War: The United States Army in Operation Desert Shield and Desert Storm*, and Edward Mann's, book, *Thunder and Lightning: Desert Storm and the Airpower Debates*. These sources provide the perspective of the services on specific details into the planning and execution of operations.<sup>30</sup> Secondary sources such as Dennis Meno's *Arms Over Diplomacy: Reflections on the Persian Gulf War* discuss the political decisions to go to war and resolve Iraqi aggression.<sup>31</sup> Together these sources provide the foundation for understanding the application of convergence in Operation Desert Storm.

This monograph contains four sections. This section, the introduction, explaining the methodology, criteria used for the case studies, defines key terms, then offers a literature review. The following sections analyze the historical case studies and apply the criteria discussed above. Specifically, the second section looks at Operation Iceberg. Section three examines Operation Desert Storm. The final section offers a conclusion and presents recommendations for future studies.

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<sup>28</sup> Bill Sloan, *The Ultimate Battle Okinawa 1945-The Last Epic Struggle of World War II* (New York: Simon and Schuster, 2007), 383; Robert Leckie, *Okinawa: The Last Battle of World War II* (New York: Penguin Group, 1996), fourth cover.

<sup>29</sup> Richard M. Swain, "*Lucky War*" *Third Army in Desert Storm* (Fort Leavenworth, KS: US Army Command and General Staff College Press, 1997), xxix.

<sup>30</sup> Frank N. Schubert, *The Whirlwind War: The United States Army in Operation Desert Shield and Desert Storm* (Washington, DC: Center of Military History, United States Army, 1995), ix; Edward C. Mann III, *Thunder and Lightning: Desert Storm and The Airpower Debates* (Maxwell Air Force Base, AL: Air University Press, 1995), 6.

<sup>31</sup> Dennis Menos, *Arms Over Diplomacy: Reflections on the Persian Gulf War* (Westport, CT: Praegar, 1992), x.

## Section 2: Operation Iceberg

As the sun rose on April 1, 1945, Allied artillery, naval gunfire, and air bombardment saturated the beaches of Okinawa. More than one thousand six hundred ships, the largest assemblage of ships in history, carrying over 545,000 soldiers and Marines descended on the shores of Okinawa. Allies successfully converged multiple domain capabilities during the decisive space, the amphibious assault achieving operational and tactical success. Forces descended upon the beaches unopposed due to the Allied air and maritime superiority. Within the first hour, 50,000 troops landed with an additional 10,000 by nightfall. From April until July, soldiers and Marines converged air, naval, and artillery fire, clearing heavily fortified defensive positions. Upon seizure of the island, Allied forces started preparations for the invasion of mainland Japan. Operation Iceberg, the final battle of the war, officially ended on July 2, 1945.<sup>32</sup> The Allied invasion of Okinawa would become an ideal example of the convergence of multiple domains.

### Waking the Sleeping Giant 1941 to 1943

In December of 1941, Japan's attack on Pearl Harbor forced the United States into the war.<sup>33</sup> Japan sought to expand its empire, mitigating its severe shortages of oil and other natural resources. Critical to the Japanese plan was the destruction of the US Navy, the only force capable of preventing Japan's territorial expansion. After the Japanese attacked Pearl Harbor, neutralizing the Pacific Fleet, Japanese forces continued offensive operations in the Western Pacific and South and Southwest Asia. Japan quickly controlled the sea and air across the Pacific

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<sup>32</sup> Leckie, *Okinawa: The Last Battle of World War II*, 49; US Army, 10th, *Action Report, Ryukyus, 26 March 1945 to 30 June 1945*, 7-III-1; Rottman, *World War II Pacific Island Guide: A Geo-military Study*, 438, 444; Nichols and Shaw, *Okinawa: Victory in the Pacific*, 93.

<sup>33</sup> John Miller Jr., *The United States Army in World War II, The War in the Pacific, Guadalcanal: The First Offensive* (Washington, DC: Center of Military History, United States Army, 2006), 1.



due to the speed and depth of their surprise assault. This victory was short-lived. Allied forces came back with a vengeance bringing a nation's might to bear down on this rising power.<sup>34</sup>

## Europe First Approach Political Constraints on Military Operations

The story of Operation Iceberg began in 1941 over 6,000 miles away and four years in the past. In August, as part of The Atlantic Conference and Charter, President Franklin D. Roosevelt and Prime Minister Winston Churchill agreed that if the United States entered the war, the Allies would defeat the Axis powers in Europe before transitioning to the Pacific. This strategy became known as the "Europe First" approach.<sup>35</sup> At the time of the agreement, the immediate British concern was Germany. German forces were on the offensive in Egypt, threatening the closure of the Suez Canal, and apparently on the cusp of victory against the Soviet Union. The British did have concerns with Japan seizing territories in Southeast Asia, but these were minor concerns when compared to the threat Germany posed.<sup>36</sup> In the fall of 1941, the United States believed that building a robust defensive capability in the Philippines would deter Japan from hostilities. The Allied plan estimated defensive preparations concluding in the spring of 1942. Planners assumed Japan would not strike until March. The Japanese attacked in December 1941 before the Allies finished defensive preparations in the Philippines.<sup>37</sup>

The United States declared war on Japan after the Japanese attack in December 1941. Hitler, in turn, declared war on the United States on December 11, 1941, and so the United States entered the European war and a world war. In January of 1942, US and British leadership formally committed to the Europe First approach at the Arcadia Conference. The leaders agreed

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<sup>34</sup> John H. Bradley, *The Second World War: Asia and the Pacific* (Wayne, NJ: Avery, 1984), xvi, 17.

<sup>35</sup> Miller, *The United States Army in World War II, The War in the Pacific, Guadalcanal: The First Offensive*, 1.

<sup>36</sup> Wayne M. Dzwonchyk, *A Brief History of the US Army in World War II* (Washington, DC: Center of Military History, 2016), 29.

<sup>37</sup> Louis Morton, *The War in the Pacific: Strategy and Command, The First Two Years* (Washington, DC: Center of Military History, 2014), 99.

to continue the prioritization of resources for Europe while assuming a strategic defense in other theaters. The leaders did agree to authorize minimal forces to safeguard vital interests in the Pacific. The interests included Australia and New Zealand, as well as sea lines of communication.<sup>38</sup> The US commitment to uphold prior agreements significantly constrained forces in the Pacific.

## Application of Political Constraints on Domain Capabilities in the Pacific

International agreements and limited resources initially constrained the Allies to the strategic defensive in operations across the Pacific. In early 1942, Allied strategists found the Europe First approach to be more complicated than they anticipated. Strategists struggled to balance resourcing the effort in Europe while fighting against Japan, who enjoyed numerical superiority and controlled the air and sea in the Pacific. Planners worried that unless offensive operations against Japan started, the imminent offensive across the Pacific would become costlier and riskier to execute.<sup>39</sup> Before any offensive, Allied planners needed resources to halt the Japanese advance, establish forward bases, and secure lines of communication. Adequately resourcing the Pacific contradicted the Europe First agreement. The United States shipped most of its men and airpower to Europe in support of defeating Germany, which limited resources for the Pacific.<sup>40</sup> The United States committed fast-carrier task forces to the Pacific since it was primarily a naval fight, and the entire British navy provided sea control over the Atlantic. However, even with the carrier task forces, Allies were limited in their Pacific-based capabilities.<sup>41</sup>

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<sup>38</sup> Dzwonchuk, *A Brief History of the US Army in World War II*, 29.

<sup>39</sup> Stephen J. Lofgren, *World War, 1939-1945 Campaigns Solomon Islands* (Washington, DC: Center of Military History, 1993), 3; Morton, *The War in the Pacific: Strategy and Command, The First Two Years*, 142, 158.

<sup>40</sup> Morton, *The War in the Pacific: Strategy and Command, The First Two Years*, 258.

<sup>41</sup> Dzwonchuk, *A Brief History of the US Army in World War II*, 29.

## Initial Application of Domain Capabilities

The Allies initially employed single domain capabilities in the Pacific because of a lack of resources. In December 1941, twenty-nine US submarines began unrestricted submarine warfare against Japanese shipping. By the summer, submarines destroyed 215,198 tons of Japanese freight.<sup>42</sup> At the beginning of 1942, US forces naval conducted raids across the Pacific, gaining time to rebuild the Pacific Fleet.<sup>43</sup> In April, the United States conducted aerial bombing of Tokyo in what is now known as the Doolittle Raid.<sup>44</sup> None of these operations on their own had a significant impact on halting Japan's advance across the Pacific, but together, they gained time for the Allies to build capabilities while building confidence seizing the initiative from Japan.<sup>45</sup>

## Application of Multiple Domain Capabilities in the Battle of the Coral Sea

In May 1942, Allied forces converged multiple domain capabilities during the Battle of Coral Sea while working within the political constraints the Europe First approach imposed on the Pacific. US Navy Admiral Chester Nimitz, Commander of the Pacific Ocean Areas, advanced west from Hawaii towards Japan with an initial mission, which was almost entirely based on the operational defensive.<sup>46</sup> During this advance, allied forces leveraged the electromagnetic spectrum intercepting and decoding Japanese messages. In late April, decoded Japanese messages

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<sup>42</sup> Gordon L. Rottman, *Okinawa 1945: The Last Battle* (Oxford: Osprey, 2002), 51; Bradley, *The Second World War: Asia and the Pacific*, 115-116; Hansell, *The Strategic Air War Against Germany and Japan*, 198; Dzwonchuk, *A Brief History of the US Army in World War II*, 39.

<sup>43</sup> Appleman et al., *Okinawa: The Last Battle*, 1; Miller, *The United States Army in World War II, The War in the Pacific, Guadalcanal: The First Offensive*, 1; King, *U.S. Navy at War 1941-1945: Official Reports to the Secretary of the Navy*, 48; Dzwonchuk, *A Brief History of the US Army in World War II*, 31.

<sup>44</sup> Morton, *The War in the Pacific: Strategy and Command, The First Two Years*, 272.

<sup>45</sup> Miller, *The United States Army in World War II, The War in the Pacific, Guadalcanal: The First Offensive*, 1.

<sup>46</sup> Morton, *The War in the Pacific: Strategy and Command, The First Two Years*, 143.

informed Nimitz of Japanese intentions to travel through the Coral Sea towards Port Moresby.<sup>47</sup> Nimitz repositioned his forces meeting the Japanese fleet in the Coral Sea. During the meeting engagement, Nimitz deployed surface ships and carrier-based aircraft. Additionally, US Army General Douglas MacArthur, commander of the Southwest Pacific Area, deployed submarines and land-based aircraft in support of Nimitz.<sup>48</sup> Japanese and Allied forces suffered heavy losses. The result of the battle prevented Japan's advance towards their objective.<sup>49</sup> With limited naval capabilities, Nimitz capitalized on the opportunity to take the war to Japanese forces, disintegrating Japan's control over the Pacific while building confidence in the Allies capabilities.

### Application of Domain Capabilities in Battle of Midway

In June 1942, Allies continued converging capabilities across the maritime and air domain as well as the electromagnetic spectrum in the Battle of Midway. Similar to the Battle of the Coral Sea, Allies decoded Japanese messages and concluded that Japanese forces were planning an attack on Midway. Nimitz repositioned his forces intercepting the Japanese advance. Before the battle, Allies reinforced Nimitz naval and air capabilities. During the battle, Allied forces dealt a significant blow to Japanese forces, defeating Japan's air and naval forces, destroying four Japanese aircraft carriers. The victory at Midway provided Allied forces an opportunity to extend operations in the Pacific, requiring planners to contradict the Europe First approach and commit additional resources to the Pacific.<sup>50</sup> Midway and Coral Sea victories halted the Japanese advance, setting conditions for Allies to receive additional resources to maintain the initiative and to start offensive operations in the Pacific.

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<sup>47</sup> Edward Jablonski, *America in the Air War* (Alexandria, VA: Time-Life Books, 1982), 155; David Mondey and Lewis Nalls, *USSAF at War in the Pacific* (New York: Charles Scribner's Sons, 1980), 96.

<sup>48</sup> Morton, *The War in the Pacific: Strategy and Command, The First Two Years*, 255, 276, 283.

<sup>49</sup> King, *U.S. Navy at War 1941-1945: Official Reports to the Secretary of the Navy*, 45; Morton, *The War in the Pacific: Strategy and Command, The First Two Years*, 251.

<sup>50</sup> Bradley, *The Second World War: Asia and the Pacific*, 133.

## Converging Multiple Domain Capabilities in the Battle for Guadalcanal

From August 1942 to February 1943, Allies converged maritime, air, and land capabilities in the first offensive of the Pacific War during the Battle for Guadalcanal. The Japanese strong point, Rabaul, threatened sea lines of communication between the United States and Australia. In July of 1942, Allied leadership ordered and resourced a limited offensive to reduce Japanese military capability in the area to secure the lines of communication. The first task in the assault was to seize Guadalcanal and the adjacent islands.<sup>51</sup> Vice Admiral Robert Ghormley, commander of the South Pacific Area, leveraged transport ships to move land forces, including cruisers and carrier aircraft, as well as land-based bombers, and bombarded the island in preparation for the amphibious landing. Aerial resupply, close air support, and naval gunfire sustained the ground fight until Allies secured Guadalcanal.<sup>52</sup> At sea, Allied naval and air forces successfully repelled Japanese counterattacks. In the end, both sides suffered heavy losses, but the Allies' ability to reinforce troops, ships, and planes proved decisive in the battle. In contrast, Japan's inability to sustain its forces forced the Japanese to withdrawal to Rabaul. The Allied seizure of Guadalcanal wrested the strategic initiative from Japan. The Allied coordination and execution of multiple domain capabilities in the Battle for Guadalcanal established a framework for future operations in the Pacific War.<sup>53</sup>

From 1941 to 1943, Allied planners worked within the constraints of a Europe First approach, increasing domain capabilities in the Pacific. At the beginning of 1942, forces conducted naval raids across the Pacific gaining time as the United States mobilized. In the summer, the Allies converged capabilities across the maritime and air domains and the

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<sup>51</sup> Morton, *The War in the Pacific: Strategy and Command, The First Two Years*, 300.

<sup>52</sup> Michael R. Matheny, *Carrying the War to the Enemy: American Operational Art to 1945* (Norman, OK: University of Oklahoma Press, 2012), 90, 150; William L. McGee, *The Amphibians are Coming: Emergence of 'Gator Navy and its Revolutionary Landing Craft* (Santa Barba, CA: BMC, 2000), 15; Miller, *The War in the Pacific: Guadalcanal the First Offensive*, 17.

<sup>53</sup> Bradley, *The Second World War: Asia and the Pacific*, 133; Dzwonchyk, *A Brief History of the US Army in World War II*, 38.

electromagnetic spectrum capabilities in two critical battles, Battle of the Coral Sea and Battle of Midway. These efforts enabled offensive operations across the Pacific.<sup>54</sup> In late summer, planners allocated additional resources to the Pacific as Allies launched the first offensive operation, converging land, sea, and air capabilities. At the end of 1942, the Japanese were unable to overcome their losses as the Allies expanded their operational reach.<sup>55</sup> The Europe First approach initially allowed for defensive actions in the Pacific; however, the victories in 1942 convinced Allied leadership that they could simultaneously execute offensive operations in the Pacific.

### Retaining the Initiative 1943 to 1944

From 1943 to 1944, Allied Forces increased their ability to converge maritime, air, land, and electromagnetic spectrum capabilities while working within established political constraints. During the Casablanca, Trident, Quebec, and Sextant conferences, international leaders developed a general strategy for the Pacific while maintaining a Europe First Approach. Allied planners working within the established constraints increased resources and operations in the Pacific. Allied operations executed throughout 1943 established favorable conditions to defeat Japan.

### The Casablanca Conference's Political Guidance and Constraints

During the Casablanca Conference of January 1943, international leaders failed to develop a clear plan for defeating Japan because their focus remained on Europe. US, British, and French leaders discussed where to strike in Europe after securing North Africa. For the Pacific, the leaders sought to exploit recent victories. Because of limited resources, the Allies committed to an offensive-defensive strategy employing most of the limited forces in theater to defend recent

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<sup>54</sup> Charles R. Anderson, *Guadalcanal, Battle of Solomon Islands, 1942-1943* (Washington, DC: Center of Military History, 1993), 5.

<sup>55</sup> Appleman et al., *Okinawa: The Last Battle*, 1; Miller, *The United States Army in World War II, The War in the Pacific, Guadalcanal: The First Offensive*, 1; King, *U.S. Navy at War 1941-1945: Official Reports to the Secretary of the Navy*, 48; Dzwonchuk, *A Brief History of the US Army in World War II*, 31.

gains. Planners gradually increased ships, planes, and troops to the Pacific for the limited offensive, but the bulk of the ground combat divisions, logistical support, and land-based aircraft went to Europe. At the conference, the leaders agreed the British would attack Burma while the United States continued its limited offensive across the Pacific, disrupting Japanese lines of communication. The conference ended with international leaders confirming the prioritization of Europe over the Pacific.<sup>56</sup>

## Application of Political Constraints on Domain Capabilities in the Pacific

During the Trident Conference in May, the Combined Chiefs of staff developed a strategic plan for defeating Japan. Allied planners working within the guidelines outlined at the Casablanca Conference proposed an increase in naval assets, aircraft, and land forces in support of offensive operations. General MacArthur would advance through the Southwest Pacific, continuing the offensive to reduce Japan's military strongpoint at Rabaul. Nimitz would continue an advance through the Central Pacific. Allied naval forces from the South Pacific area would support both MacArthur and Nimitz's advance. Roosevelt and Churchill approved the strategy and additional resources. For the first time in the war, Allied forces in the Pacific received sufficient combat power achieving qualitative overmatch in the Pacific.<sup>57</sup>

## Converging Domain Capabilities in Operation Cartwheel

In June 1943, Allied forces in the Pacific converged domain capabilities during their offensives, reducing Japan's military capabilities in Rabaul. MacArthur initiated a series of amphibious assaults across New Guinea, New Britain, and the Solomon Islands in Operation Cartwheel, setting conditions for the seizure of Rabaul. Throughout the offensive, Allied forces converged capabilities across the air, maritime, and land domains as well as the electromagnetic

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<sup>56</sup> King, *U.S. Navy at War 1941-1945: Official Reports to the Secretary of the Navy*, 38; Morton, *The War in the Pacific: Strategy and Command, The First Two*, 381.

<sup>57</sup> Morton, *The War in the Pacific: Strategy and Command, The First Two Years*, 454; Bradley, *The Second World War: Asia and the Pacific*, 149.

spectrum creating overmatch against Japanese forces. MacArthur's forces advanced exploiting exterior lines reducing Japan's air and naval capabilities while gaining territory and establishing airbases extending operational reach.<sup>58</sup>

## The Quebec Conference's Political Guidance and Constraints

At the Quebec Conference in August 1943, international leaders reexamined the Pacific strategy. In Europe, the Allies continued the strategic bombing of Germany while conducting a land offensive in Italy.<sup>59</sup> Nimitz was preparing for offensive operations and received additional forces, including new Essex class carriers, light carriers, and battleships.<sup>60</sup> The United States' industrial capacity increased allied air and naval capabilities in both Europe and the Pacific. The growing Allied airpower and sustained submarine warfare prevented Japan from resupplying its forces throughout the Pacific.<sup>61</sup> At the conference, optimistic international leaders agreed on the objective of the war as the unconditional surrender of the Axis powers. Leaders agreed to continue prioritizing resources in Europe over the Pacific while maintaining pressure on Japan, setting conditions for an eventual offensive in the Pacific. They decided to isolate Rabaul rather than seize the island, opening a path towards Japan.<sup>62</sup>

## Converging Domain Capabilities in the Central Pacific

Throughout November 1943, Nimitz continued his advance, converging multiple domain capabilities employing submarines, carrier task forces, carrier-based aircraft, and land forces across the Central Pacific. In late 1943, Allies secured the Gilbert Islands and threatened the

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<sup>58</sup> Bradley, *The Second World War: Asia and the Pacific*, 139.

<sup>59</sup> Combined Chiefs of Staff, *Minutes of the Sextant Conference, November-December 1943*, 3, accessed February 7, 2020, <http://cgsc.contentdm.oclc.org/cdm/singleitem/collection/p4013coll8/id/3691/rec/1>.

<sup>60</sup> Bradley, *The Second World War: Asia and the Pacific*, 152.

<sup>61</sup> Dzwonchuk, *A Brief History of the US Army in World War II*, 38.

<sup>62</sup> Hansell, *The Strategic Air War Against Germany and Japan*, 135; King, *U.S. Navy at War 1941-1945: Official Reports to the Secretary of the Navy*, 63.



Japanese base in the Carolines. Nimitz's forces bypassed Japanese strong points, attacking weak points reducing Japan's air and naval capabilities while extending Allied operational reach.

Nimitz's seizure of the Gilbert Islands committed the Allies to offensive operations in the Central Pacific.<sup>63</sup>

## Sextant Conference's Political Guidance and Constraints

Political guidance established at the November 1943 Sextant Conference in Cairo set favorable conditions for offensive operations in 1944. In late November 1943, US, British, and Chinese leaders solidified plans for the 1944 Pacific drive. US and British leadership at the conference focused their efforts on the invasion of Europe, while MacArthur and Nimitz continued their advances across the Pacific towards Japan. Leaders agreed on establishing sea and air blockades in conjunction with the strategic bombing of Japan. Allied planners agreed to increase resources in support of the Central Pacific drive. The conference reconfirmed the priority of Europe over other theaters.<sup>64</sup>

From 1943 to 1944, Allied forces increased their ability to converge maritime, air, land, and electromagnetic spectrum capabilities establishing forward bases while disintegrating Japan's military capabilities. Allied planners worked within established Europe First approach guidance and constraints employing forces across the Southwest and Central Pacific. The Allied decision to increase resources in the Pacific proved critical in MacArthur and Nimitz's success.

## Converging Domain Capabilities in the Twin Drive Across Pacific

In 1944, Allied forces adhered to the political and military guidance established at the Sextant Conference of 1943. By Early 1944, Japan's navy and air force were mere fractions of

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<sup>63</sup> Appleman et al., *Okinawa: The Last Battle*, 1; Miller, *The United States Army in World War II, The War in the Pacific, Guadalcanal: The First Offensive*, 1; Bradley, *The Second World War: Asia and the Pacific*, 156.

<sup>64</sup> Combined Chiefs of Staff, *Minutes of the Sextant Conference*, 23-24; Bradley, *The Second World War: Asia and the Pacific*, 156.

what they were at the end of 1941. Allied operations conducted in 1944 focused on destroying the rest of Japan's air and naval capabilities in the Pacific. Allied forces advanced across the Pacific along two mutually supporting drives, dominating Japanese forces. The advances kept Japan off-balance addressing threats from two different directions and of two different types, land-based attacks in the southwest and carrier-based attacks in Central Pacific. The Allies' ability to converge domain capabilities increased in size and scope because of the additional resources allocated to the Pacific. At the end of 1944, the Allies established air and naval superiority setting conditions for the final offensive thrust towards Japan.<sup>65</sup>

In the opening months of 1944, new Allied carriers, freshly trained ground divisions, and growing air squadrons penetrated Japan's inner defenses securing critical islands in the Pacific.<sup>66</sup> In February, Nimitz's forces quickly secured the Marshall Islands while MacArthur's forces secured footholds on Bougainville and the Admiralty Islands. In March, MacArthur's forces effectively isolated Japan's strong point, Rabaul, ending Operation Cartwheel. In the summer, forces in the Southwest Pacific continued advancing along the northern coast of New Guinea positioning forces within range to strike the Philippines.<sup>67</sup>

In June, Allied forces launched a successful invasion of Western Europe, as Nimitz's forces secured the Mariana Islands defeating Japan's remaining carriers. Nimitz's forces showcased new and improved naval ships, aircraft, and anti-aircraft batteries as Allies shot down over 600 Japanese planes and sank three carriers during the Battle of the Philippine Sea.<sup>68</sup> Allied forces dominated Japanese forces on account of increased and improved resources for the Pacific Theater. Japanese forces could not stop the Allied advance. After the battle, Allies effectively

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<sup>65</sup> Stanley Sandler, ed., *World War II in the Pacific: An Encyclopedia* (New York: Garland, 2001), 52; Bradley, *The Second World War: Asia and the Pacific*, 144.

<sup>66</sup> Bradley, *The Second World War: Asia and the Pacific*, 144.

<sup>67</sup> Sandler, *World War II in the Pacific: An Encyclopedia*, 274.

<sup>68</sup> James F. Dunnigan and Albert A. Nofi, *Victory at Sea: World War II in the Pacific* (New York: William Morrow and Company, 1995), 47.

eliminated Japanese carrier power and established airbases in the Marianas positioning bombers within 1,300 miles of mainland Japan.<sup>69</sup> For the first time, Allied forces placed sustained and uncontested lethal effects on the Japanese home islands.

## Strategic Bombing Campaign

In the summer of 1944, Allies initiated a strategic bombing campaign in the Pacific, destroying Japan's ability to wage war. Allied planners focused aerial bombing on breaking Japan's will and industrial base. The planners were confident that Allied forces were on the verge of defeating Germany and subsequently sent new long-range heavy bombers, the B-29 Superfortress, to the Pacific. Allies sending new aerial equipment to the Pacific highlighted the beginning of shifting critical resources to the Pacific over Europe. The B-29s, with an operational range of 3,000 miles, launched from forward bases in China, India, and islands across the Central and Southwest Pacific, striking mainland Japan and Japanese strong points across the Pacific, destroying military infrastructure, and factories. The Allies continued relentless aerial bombardments, devastating Japan until the end of the war.<sup>70</sup> The aerial bombardment expedited Japan's operational culmination and prevented Japanese forces from hindering Allied forces convergence in the final year of the war.

## Isolating Mainland Japan

In 1944, the Allies employed air and naval capabilities inflicting heavy losses on Japanese shipping and resupply capabilities. As the Joint Chiefs directed in March, Allied forces increased submarine activity in the Pacific, sinking over 600 merchant and military vessels around Japan in 1944, reducing Japan's cargo capacity in half.<sup>71</sup> Additionally, the Allies started

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<sup>69</sup> Bradley, *The Second World War: Asia and the Pacific*, 161; Sandler, *World War II in the Pacific: An Encyclopedia*, 69.

<sup>70</sup> Nichols, and Shaw, *Okinawa: Victory in the Pacific*, 37; Dzwonchyk, *A Brief History of the US Army in World War II*, 41; Hansell, *The Strategic Air War Against Germany and Japan*, 10, 19, 141, 191, 216; Sandler, *World War II in the Pacific: An Encyclopedia*, 14, 387.

<sup>71</sup> Sandler, *World War II in the Pacific: An Encyclopedia*, 14, 329.

aerial mining the waters around Japan restricting movement of Japanese maritime capabilities. The submarine and mining activity prevented Japan from reinforcing and resupplying forces in the Pacific expediting their culmination..<sup>72</sup>

## The Octagon Conference's Political Guidance and Constraints

In September 1944 at the Octagon Conference, Allied leadership increased resources in the Pacific but failed to solidify a plan to ultimately defeat Japan. The primary attendees, President Roosevelt and Prime Minister Churchill discussed stiffened German resistance in Western Europe and increased British participation in the Pacific. The leaders focused much of their attention on Germany's post-war occupation. They agreed to continue aerial bombardment of Japan and unremitting submarine warfare against Japanese shipping..<sup>73</sup> During the conference, the Combined Chiefs of Staff presented two courses of action outlining different routes converging on Japan. However, the leaders made no formal decision. Roosevelt and Churchill did agree on reallocating British bombers and a British Naval fleet and from Europe to the Pacific, marking a significant change in resource allocation to the Pacific Theater. Europe remained the primary theater; however, Allies diminished the German threat presenting opportunities to adjust resources priorities..<sup>74</sup>

## Decision for the Philippines and Okinawa

Political considerations ultimately decided the Allies' courses of action in defeating Japan. For months, Allied planners argued for and against the invasions of Formosa and the Philippines before invading mainland Japan. MacArthur, with Nimitz's concurrence, argued for invading the Philippines, increasing forward bases supporting aerial attacks on Japan, but more

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<sup>72</sup> Bradley, *The Second World War: Asia and the Pacific*, 164.

<sup>73</sup> John Ehrman, *Grand Strategy: Volume V August 1943–September 1944* (London: Her Majesty's Stationery Office, 1956), 507, 518.

<sup>74</sup> Combined Chiefs of Staff, *OCTAGON Conference, September 1944: Papers and Minutes of Meetings OCTAGON Conference* (Washington, DC: Office, US Secretary of the Combined Chiefs of Staff, 1944), 34, 125.

notably, he argued for the importance of reestablishing the Philippine Government in Manila. The political implications influenced President Roosevelt's decision to invade the Philippines.<sup>75</sup> At the beginning of October, the Joint Chiefs of Staff directed MacArthur to invade Luzon and Nimitz to bypass Formosa, seizing Iwo Jima and Okinawa.<sup>76</sup> The US Joint Chiefs of Staff ordered Nimitz to provide naval assets, including fast carriers for MacArthur's invasion of Luzon, and ordered MacArthur to provide air support to Nimitz for the assault on Okinawa.<sup>77</sup> The finalized decision to invade the Philippines and Okinawa set conditions for the final offensive of the war.

## Converging Domain Capabilities on the Philippines

MacArthur leveraged the knowledge gained from the previous years' experience creating overmatch through convergence during his invasion of the Philippines. On October 15, Allied forces initiated the attack with a five-day aerial bombardment of Leyte, Luzon, Formosa, and Okinawa reducing enemy defenses.<sup>78</sup> On October 20, MacArthur's forces initiated the largest naval engagement up to 1943, destroying the Japanese surface fleet. Allied forces employed seventeen heavy aircraft carriers, eighteen light escort carriers, eighteen battleships, seven cruisers, seven light cruisers, and ninety-five destroyers.<sup>79</sup> The US Navy was nothing like what the Japanese faced three years prior. Allied forces converged air, maritime, and land forces sending over 132,000 troops ashore. MacArthur's forces would continue operations in the Philippine Islands until the spring of 1945. Political constraints and Japan's control over the

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<sup>75</sup> Bradley, *The Second World War: Asia and the Pacific*, 148; Robert R. Smith, *Triumph in the Philippines* (Washington, DC: Center of Military History, 1993), 8.

<sup>76</sup> Bradley, *The Second World War: Asia and the Pacific*, 196.

<sup>77</sup> Bradley, *The Second World War: Asia and the Pacific*, 179; Smith, *Triumph in the Philippines*, 16-17.

<sup>78</sup> Bradley, *The Second World War: Asia and the Pacific*, 192.

<sup>79</sup> Sandler, *World War II in the Pacific: An Encyclopedia*, 428.

Pacific prevented the Allies from massing such a force the previous two years. Leyte Island served as a significant staging base for both MacArthur and Nimitz in the final year of the war.<sup>80</sup>

At the end of 1944, the Allies controlled the air and maritime spaces across the Pacific because of the successful employment of multiple domain capabilities across time and space setting conditions for the final offensive of the war. At the end of the year, Japan's Navy and Air Force virtually ceased to exist. Allied bombers neutralized the Japanese industry, paralyzing Japan's ability to wage war and submarine warfare isolated mainland Japan.

## Defeating Japan, 1945

Allied forces effectively converged multiple domain capabilities on Okinawa in 1945 during the final year of the Second World War. Allied forces effectively neutralized Japan's naval and air forces as well as isolated mainland Japan. MacArthur's forces continued clearing the Philippine Islands.<sup>81</sup> In February, Nimitz's forces landed on Iwo Jima, securing the island in five weeks. In the spring, the last two major campaigns of the Pacific war, Luzon and Okinawa, took center stage. The battle for Okinawa, Operation Iceberg, highlighted the Allies pinnacle event in converging multiple domain capabilities at the decisive space, the amphibious assault on the beaches of Okinawa.

For months before the invasion, Allied forces employed air capabilities establishing favorable conditions for the amphibious assault on Okinawa. Allied air started bombing Japanese defensive positions throughout the island in October 1944. Allied air conducted approximately 1,300 sorties over Okinawa, destroying military facilities and anti-aircraft defenses.<sup>82</sup> Raids continued at least once per month until the week preceding of the amphibious assault when Allies

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<sup>80</sup> Smith, *Triumph in the Philippines*, 4.

<sup>81</sup> Smith, *Triumph in the Philippines*, 3.

<sup>82</sup> Leckie, *Okinawa: The Last Battle of World War II*, 39.

conducted aerial raids daily. Months of preliminary air attacks on and around Okinawa established conditions for an unopposed landing.<sup>83</sup>

In March, Allied land and naval forces isolated Okinawa, seizing the adjacent islands. Allied forces seized the Kerama Retto islands located just southwest of Okinawa, establishing a solid foothold for the operation. These islands served as a local anchorage for naval repairs and as a seaplane base during the operation. Allied forces destroyed several hundred suicide boats loaded with high explosives. The destruction of the ships dealt a critical blow to the Japanese defensive plan of Okinawa.<sup>84</sup> Of equal importance, the Allies established two Field Artillery battalions on the islands which provide artillery fires in support of the landing on Okinawa.<sup>85</sup>

On April 1, 1945, as the sun rose, artillery, naval gunfire, and air bombardment saturated the beaches of Okinawa as a massive amphibious force descended on its shores. Carrier-based aircraft intercepted and destroyed the few Japanese aircraft advancing towards the island. Allied air and sea superiority enabled unopposed landing on the beaches. Within three months, Nimitz's forces secured the Island.<sup>86</sup> The US Joint Chiefs ordered immediate preparations for the invasion of Japan. However, in August, American forces dropped atomic bombs on Japan, forcing the Japanese surrender.<sup>87</sup>

Allied planners worked within established political guidance and constraints employing domain capabilities across the Pacific Theater from December 1941 to April 1945 to achieve convergence during the amphibious assault on Okinawa. In the opening months of the war, the Europe First approach constrained Allied resources in the Pacific, limiting Allied forces' ability

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<sup>83</sup> Nichols and Shaw, *Okinawa: Victory in the Pacific*, 21, 37.

<sup>84</sup> US Army, Corps XXIV, *Report of the Okinawa Operation*, 2, 19.

<sup>85</sup> US Army, 10th, *Action Report, Ryukyus*, 26 March 1945 to 30 June 1945, 7-II-1.

<sup>86</sup> Leckie, *Okinawa: The Last Battle of World War II*, 49; US Army, 10th, *Action Report, Ryukyus*, 26 March 1945 to 30 June 1945, 7-III-1.

<sup>87</sup> Rottman, *World War II Pacific Island Guide: A Geo-military Study*, 433; Dzwonchyk, *A Brief History of the US Army in World War II*, 43.

to converge multiple domains capabilities. As the Allies demonstrated tactical and operational success, they validated the Pacific Theaters desire for additional political support. Which increased resources to the Pacific allowing commanders to mass and employ domain capabilities achieving convergence at the decisive space. At the end of 1943, Allied forces secured forward bases expanding the operational reach and increasing combat power. In 1944, the Allies established air and maritime superiority through the constant attrition of Japanese air and naval capabilities. In 1945, the Japanese did not have the means to stop the Allies from converging domain capabilities at the start of Operation Iceberg. From 1941 to 1945, political constraints and guidance gradually increased the Allies' ability to converge domain capabilities across time and space effectively.

### Section 3: Operation Desert Storm

In the early morning hours of February 24, 1991, a US-led coalition unleashed a symphony of violence, defeating the fourth largest army in the world. Ground forces advanced through the desert virtually unopposed due to the successful orchestration of air, artillery, and naval bombardment before the assault. One-hundred hours following the initiation of the ground attack, coalition forces liberated Kuwait restoring international boundaries and bringing an end to the Gulf War. International and domestic politics established favorable conditions for the employment of domain capabilities in the war. From August 1990 through February 1991, the coalition successfully employed domain capabilities to enforce economic sanctions, defend Saudi Arabia, build combat power, and ultimately defeat Iraq's military.<sup>88</sup> The Persian Gulf War from entailed four distinct phases consisting of two named operations, Operation Desert Shield and Operation Desert Storm. Operation Desert Shield, consisting of the first of the two phases,

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<sup>88</sup> Swain, "Lucky War" *Third Army in Desert Storm*, 1; Stewart, *War in the Persian Gulf: Operation Desert Shield and Desert Storm: August 1990–March 1991*, 34; Michael J. Mazarr, Don M. Snider, and James A. Blackwell Jr., *Desert Storm: The Gulf War and What We Learned* (Boulder, CO: Westview Press, 1993), 139.



focused on defending Saudi Arabia and transitioning to offensive operations. Operation Desert Shield, the third and fourth phases, focused on degrading Iraq's military capabilities and repelling Iraqi forces from Kuwait. At the end of the Persian Gulf War, coalition forces liberated Kuwait and destroyed Iraq's ability to conduct future military operations outside of Iraq.

The conflict started in August 1990, when Iraq invaded its oil-rich neighbor, Kuwait, to save Iraq's economy from collapse. Eight years of war with Iran left Iraq with a battle-tested, heavily equipped military but a crippled economy. Saddam Hussein sought to acquire Kuwaiti oil to cover Iraq's debt, and he believed the international community would allow Iraq to keep the territory seized.<sup>89</sup> On August 2, over 200,000 Iraqi troops with several hundred tanks invaded Kuwait before the international community could intervene.<sup>90</sup> Six Iraqi divisions set up a defensive line securing their gains while presenting the perception of a continued invasion into Saudi Arabia.<sup>91</sup>

## The International Response to Iraq's Invasion, August through October

From August through October 1990, international and domestic policy across United Nations (UN) member states established favorable conditions for employment of US military forces in response to Iraq's seizure of Kuwait. The initial response sought to resolve Iraq's aggression through sanctions and diplomacy while deterring further aggression. The policies authorized the use of military means across domains to enforce sanctions and to defend Saudi Arabia.

UN resolutions established conditions for limited military response to Iraq's aggression. On August 2, 1990, the UN Security Council unanimously voted in favor of UN resolution 660,

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<sup>89</sup> Schubert, *The Whirlwind War: The United States Army in Operation Desert Shield and Desert Storm*, 21.

<sup>90</sup> Robert F. Dorr, *Desert Shield the Build-Up: The Complete Story* (Osceola, WI: Motorbooks, 1991), 19.

<sup>91</sup> Stewart, *War in the Persian Gulf: Operation Desert Shield and Desert Storm: August 1990–March 1991*, 1; Swain, "Lucky War" *Third Army in Desert Storm*, xi.

condemning the invasion and demanding an immediate Iraqi withdrawal from Kuwait. The passage of UN resolution 660 attempted to end hostilities without resorting to conflict. By the end of August, Iraq bolstered its defenses in Kuwait, disregarding international condemnation of Iraqi actions. The UN Security Council subsequently passed UN resolution 661 imposing economic sanctions on Iraq and Kuwait and UN resolution 665, authorizing a naval blockade for sanction enforcement.<sup>92</sup> UN resolutions authorized the use of military means for enforcement of economic sanctions while providing legitimacy to the international response.

As the UN passed resolutions, the United States Government quickly established policy objectives in response to Iraq's invasion of Kuwait. President George H. W. Bush made it clear that the response would be an international one, complying with the direction and authority of the UN. US policies had for objectives: the immediate and unconditional withdrawal of Iraqi forces from Kuwait; the restoration of Kuwait's government; security and stability for the Gulf region; and the protection of US citizen's abroad.<sup>93</sup> The President also authorized the mobilization of 40,000 reservists to active duty in support of operations in the Persian Gulf.<sup>94</sup> US policy did not authorize the use of force to expel Iraq from Kuwait, but the policy established conditions for a limited US military intervention.

The immediate obstacle facing the United States was building an international coalition that provided a robust political and military base to address the Iraqi threat. The United States coordinated with the international community for support and access agreements. The United States had a clear interest in protecting the integrity of western-oriented Arab states like Saudi Arabia. The perceived threat of an Iraqi invasion of Saudi Arabia challenged American interest. However, Saudi Arabia had not requested foreign support and had a long-standing policy that

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<sup>92</sup> Ken Matthews, *The Gulf Conflict and International Relations* (New York: Routledge, 1993), 74.

<sup>93</sup> Harry G. Summers, *On Strategy II: A Critical Analysis of the Gulf War* (New York, NY: Dell Publishing, 1992), 18.

<sup>94</sup> *Ibid.*, 174.

forbade foreign troops on its soil. On August 6, Secretary of Defense Dick Cheney flew to Saudi Arabia to emphasize the threat Iraq posed and what assistance the United States could provide. The trip resulted in a formal request from the Saudi King for American military support.<sup>95</sup> The US president ordered an immediate military buildup for the defense of Saudi Arabia in Operation Desert Shield. The United States sought additional Arab and Muslim support to provide legitimacy for defending a state which contains Islam's holiest shrines. Other government officials, including the US president, contacted world leaders to establish an international coalition and secure access agreements, setting conditions for military operations. The British and French governments immediately committed significant contributions to the defense of Saudi Arabia. International commitments increased as other nations provided military or monetary support to uphold UN resolutions or in defense of Saudi Arabia. The lack of pre-crisis agreements required time-sensitive diplomacy for the United States and international partners.<sup>96</sup>

## Application of Domain Capabilities in Desert Shield

From August through November 1990, coalition forces employed limited air, land, maritime, and space capabilities to achieve political objectives. Iraq's invasion surprised the international community, limiting resources available for an immediate response. US and UN policies limited operations to the enforcement of resolutions and defending Saudi Arabia. As time progressed, coalition forces increased capabilities in support of their mission while increasing options for global leaders.

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<sup>95</sup> Douglas Menarchik, *Powerlift-Getting to Desert Storm: Strategic Transportation and Strategy in the New World Order* (Westport, CT: Praeger, 1993), 2, 30; Dorr, *Desert Shield the Build-Up: The Complete Story*, 23.

<sup>96</sup> Dorr, *Desert Shield the Build-Up: The Complete Story*, 31; Menarchik, *Powerlift-Getting to Desert Storm: Strategic Transportation and Strategy in the New World Order*, 25, 76; Roland Dannreuther, *The Gulf Conflict: A Political and Strategic Analysis* (London: Brassey, 1992), 27.

## Initial Employment of Domain Capabilities in Desert Shield

The coalition's initial response in defense of Saudi Arabia included air, maritime, and land capabilities. Shortly after President Bush authorized Operation Desert Storm, the United States deployed the "Ready Brigade" from the 82nd Airborne Division, 7th and 1st Marine Expeditionary Brigades, two carrier battlegroups, and two F-15 squadrons to the Persian Gulf.<sup>97</sup> Ground forces received heavy equipment from pre-positioned stocks, increasing their capabilities and lethality. The operation quickly became a multi-national effort as other nations like the United Kingdom, France, Australia, and Canada quickly committed forces in defense of Saudi Arabia.<sup>98</sup> The initial commitment of forces was no match for the fourth largest army in the world. However, the deployment demonstrated to the world that the coalition was committed to defending Saudi Arabia while also providing time for the buildup of combat power.<sup>99</sup>

## Enforcing UN Sanctions

Starting in August, coalition forces employed maritime and air capabilities enforcing UN economic sanctions. Iraq relied on access to the Red Sea and Persian Gulf for maritime trade. The international community came together as the Maritime Interception Force (MIF), preventing the import and export of commodities to and from Iraq and Kuwait. From August through November, eighty ships from seventeen nations dispersed in four geographical regions (The Gulf of Aden, Red Sea, Gulf of Oman, and the Persian Gulf), challenging more than 7,000 ships. The coalition

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<sup>97</sup> Stewart, *War in the Persian Gulf: Operation Desert Shield and Desert Storm: August 1990–March 1991*, 3.

<sup>98</sup> Swain, "Lucky War" *Third Army in Desert Storm*, 38.

<sup>99</sup> James Goldrick, "The Maritime Elements in the 1990-91 Gulf Crisis," in *Naval Coalition Warfare: From the Napoleonic War to Operation Iraqi Freedom*, ed. Bruce A. Elleman and S. C. M. Paine (New York: Routledge, 2008), 161.

integrated aircraft for surveillance as naval ships intercepted shipping vessels. The MIF's efforts disrupted Iraq's ability to conduct military operations without escalating to armed conflict..<sup>100</sup>

## Building Combat Power

Coalition forces leveraged air and maritime capabilities for the continued increase in combat power supporting national and international objectives. From August to November, strategic lift brought four US Army divisions and one US Marine Expeditionary Force to the theater. Over 150 ships hauled more than 2,900,000 metric tons of cargo and fuel. While strategic airlift capabilities flew over 5,235 missions, hauling over 175,000 short tons of cargo and 180,000 troops. The use of strategic air and sea lift capabilities moved troops and heavy equipment to the theater, increasing military options for international leaders. At the end of October, there were over 200,000 coalition troops deployed in support of Operation Desert Shield..<sup>101</sup>

At the end of October, it appeared that the coalition had successfully deterred Iraq's possible invasion of Saudi Arabia. However, the enforcement of economic sanctions and international diplomacy failed to dislodge Iraqi forces from Kuwait and restore international borders. As coalition forces massed combat power in the Persian Gulf, Iraq continued to improve its defenses in Kuwait. The international community needed other options to expel Iraq out of Kuwait.

## From Deterrence to Armed Conflict, November 1990 to January 1991

November 1990 marked the coalition's formal transition in diplomacy from sanction enforcement to armed conflict. From August to November, the coalition gradually increased forces and capabilities, providing additional military options for world leaders. At the same time,

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<sup>100</sup> Goldrick, "The Maritime Elements in the 1990-91 Gulf Crisis," 162; Dorr, *Desert Shield the Build-Up: The Complete Story*, 37; Edward J. Marolda and Robert J. Schneller Jr., *Shield and Sword: The United States Navy and the Persian Gulf War* (Washington, DC: Naval Historical Center, 1998), 152.

<sup>101</sup> Goldrick, "The Maritime Elements in the 1990-91 Gulf Crisis," 164; Menarchik, *Powerlift-Getting to Desert Storm: Strategic Transportation and Strategy in the New World Order*, 2.

the Iraqi Government and Iraqi Army offered no signs of compliance with international demands to leave Kuwait. Frustrated with the inability to achieve a diplomatic solution, the United States and the UN explored other means to achieve an end to the crisis. The United States considered combat operations as the UN passed additional resolutions authorizing the use of force to achieve objectives.

On November 9, US policy changed from defending Saudi Arabia to liberating Kuwait. President Bush ordered his staff to start developing plans to expel Iraq from Kuwait forcefully. The President ordered an increase of 150,000 troops, authorizing the use of VII Corps from Germany and the activation of additional National Guard and Reserve soldiers to support the surge..<sup>102</sup> The increased capabilities sought to provide an overwhelming offensive capacity to achieve national objectives.

At the end of November, the UN Security Council passed additional measures authorizing the use of force to expel Iraq from Kuwait. UN resolution 678 passed on November 29, allowing member states to use all necessary means to uphold previous UN resolutions unless Iraq withdraws from Kuwait by January 15, 1991..<sup>103</sup> This resolution provided time for diplomacy to work without escalation to conflict while allowing time for the additional military build..<sup>104</sup> The US stance changed to liberating Kuwait with force, while UN resolution 678 authorized the use of force. Together, UN resolution 678 and the updated US national policy established favorable conditions for employment of domain capabilities to achieve the desired endstate.

## Offensive Preparations

From November to January, coalition forces employed all of its domain capabilities to maintain operations while preparing for offensive operations. The updated political guidance and

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<sup>102</sup> US Department of Defense, *Conduct of the Persian Gulf War*, Final Report to Congress, April 1992, X.

<sup>103</sup> Summers, *On Strategy II: A Critical Analysis of the Gulf War*, 39.

<sup>104</sup> Matthews, *The Gulf Conflict and International Relations*, 74.

additional resources enabled the coalition to continue enforcement of sanctions, build additional combat power, and gather intelligence for future operations. By January 15, 1991, coalition forces achieved conditions for offensive operations to liberate Kuwait.

The coalition continued employing maritime and air capabilities enforcing UN economic sanctions during preparations for combat operations. Some nations participating in the MIF were not comfortable with direct military action. The coalition leadership leveraged these nations' capabilities and national mandates, maximizing the collective effort while allowing partner nations to abide by their respective political constraints. This resulted in a multi-tiered effort, with some countries remaining in the MIF focusing on sanction enforcement as the US Navy rapidly integrated others in carrier battle groups. This action allowed US forces to finalize coordination and planning efforts for pending offensive operations. The MIF's efforts continued degrading Iraq's ability to sustain its forces. By the end of 1990, the MIF achieved the primary aims of the sanctions, cutting off Iraq from the world economy and denying Iraqi forces the material necessary to support its war efforts..<sup>105</sup>

The coalition increased the employment of air and maritime capabilities meeting the surge in combat power for pending offensive operations. From November to January, the United States deployed an additional three US Army divisions, and one US Marine Expeditionary Force, nineteen air squadrons, and three more carrier battle groups to the Persian Gulf. Three hundred twenty-one coalition ships hauled an additional 3,600,000 measurement tons from United States and European ports to the Gulf. As the coalition started preparing for offensive operations, airpower continued to increase combat strength in the theater. From November to January, air capabilities conducted over 5,000 additional airlift missions hauling over 140,000 short tons and 200,000 troops to the Gulf. The air and sealift capabilities projected power on a scale that had not

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<sup>105</sup> Goldrick, "The Maritime Elements in the 1990-91 Gulf Crisis," 158, 164.

been seen since the Second World War, setting conditions for the ground campaign in Operation Desert Storm.<sup>106</sup>

Coalition forces leveraged air and space capabilities to collect intelligence for offensive operations. Coalition forces leveraged unmanned aerial vehicles, satellite imaging, and joint surveillance and target radar systems to identify locations of Iraq's critical capabilities such as radars or command and control nodes. The coalition analyzed the intelligence and then nominated targets for future operations. Aircraft mapped minefields, increasing situational awareness. The coalition leveraged real-time imagery increasing situational awareness and pinpointing targets for the air campaign.<sup>107</sup>

### Authorization for Operation Desert Storm

The UN resolution 678 set a deadline of January 15, 1991. As this date approached without diplomatic resolution of UN demands, coalition forces poised to strike militarily. International leaders from Iraq, the United States, and the United Kingdom participated in negotiations on January 9. During the negotiations, Iraq demanded concessions for leaving Kuwait. The United States made it clear that it was not amenable to granting any concessions. At this time, the coalition had massed over 500,000 troops, and economic sanctions effectively crippled Iraq's capability to sustain its military. Final diplomatic efforts failed in securing a peaceful resolution to the crisis.<sup>108</sup>

With the coalition refusal of all Iraqi demands, military operations authorized under UN resolution came into effect, and demonstrated the employment of domain capabilities to achieve established objectives. Though the President had ordered preparations for offensive operations, he

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<sup>106</sup> Goldrick, "The Maritime Elements in the 1990-91 Gulf Crisis," 164; Menarchik, *Powerlift-Getting to Desert Storm: Strategic Transportation and Strategy in the New World Order*, 2.

<sup>107</sup> Mazarr, Snider, and Blackwell, *Desert Storm: The Gulf War and What We Learned*, 106; US Department of Defense, *Conduct of the Persian Gulf War*, xiii.

<sup>108</sup> Menos, *Arms Over Diplomacy: Reflections on the Persian Gulf War*, 1.



had not obtained the authority to use military force to achieve political objectives. For three days, US Congressional members debated the approval of authorizations. On January 12, the US Senate and the House of Representatives passed the US resolution authorizing the use of military means to expel Iraq from Kuwait. The US Government determined that all appropriate and diplomatic means to obtain Iraqi compliance and that those means have not and would not be successful.<sup>109</sup> As coalition forces finished preparations, the US Government authorized President Bush the use of military force to expel Iraq from Kuwait.

## Domain Capabilities in Desert Storm's Air Campaign

January 17, 1991 marked the transition from Operation Desert Shield to Desert Storm. The international community gave Saddam Hussein multiple opportunities to withdraw peacefully, avoiding the escalation to armed conflict before UN resolution 678 expired. The coalition initiated operations with a massive air campaign. The campaign planners sought to destroy Iraq's command and control capabilities; establish air superiority, sever lines of communication; destroy Iraq's chemical, biological, and nuclear capabilities; and defeat the Iraqi Republican Guard. Coalition aircraft launched from North America, Europe, Egypt, Turkey, Saudi Arabia, and from aircraft carriers in the Persian Gulf in pursuit of the objectives. The coalition air campaign lasted five weeks, building to the convergence of multiple domains capabilities in support of the ground campaign.<sup>110</sup>

Coalition forces converged domain capabilities to penetrate Iraqi defenses and disintegrate command and control capabilities. In the early morning hours of the air campaign, US Army helicopters destroyed Iraqi radar systems, allowing coalition aircraft to operate

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<sup>109</sup> Menarchik, *Powerlift-Getting to Desert Storm: Strategic Transportation and Strategy in the New World Order*, 2; Joint Resolution, Public Law 1, 102nd Cong., 1 sess. (January 14, 1991); Summers, *On Strategy II: A Critical Analysis of the Gulf War*, 197.

<sup>110</sup> Thomas A. Keaney and Eliot A. Cohen, *Gulf War Air Power Summary Report* (Washington, DC: Government Printing Office, 1993), 39, 56; US Department of Defense, *Conduct of the Persian Gulf War*, xiii.

undetected. The coalition proceeded with airstrikes and missile bombardment of defensive positions.<sup>111</sup> Naval forces launched tomahawk land attack missiles and naval gunfire support missions, destroying Iraq's communication facilities, radar sites, air defense platforms, and electronic warfare sites. Stealth bombers destroyed command nodes and bombarded defensive positions. Additionally, coalition aircraft employed electronic warfare systems to jam early warning and acquisition systems, radio communications, data links, and navigation systems in Kuwait and Iraq.<sup>112</sup> In the opening hours of the air campaign, coalition forces destroyed much of Iraq's air defense network and command and control systems. Having neutralized Iraq's air defenses and paralyzed Iraq's command and control systems, coalition forces were free to engage targets across the battlefield. The disintegration of Iraq's military capabilities set conditions for coalition aircraft to operate unhindered.

From January 17 to February 24, coalition forces continued shaping across all domains, reducing Iraq's military means. Coalition forces effectively destroyed Iraq's air force, establishing air supremacy by the ninth day of Desert Storm. Iraq ceased air operations after suffering massive air losses in the opening days of battle. Coalition air and naval bombardment of Iraqi lines of communications, supply stockpiles, and defensive positions disrupted Iraq's ability to operate as a coherent force.<sup>113</sup> The coalition conducted artillery raids destroying Iraq's mid-range artillery along the Saudi Arabia border, allowing coalition freedom of movement to assault positions in preparation for the ground offensive.<sup>114</sup> By the end of January, coalition forces reduced Iraq's supplies in Kuwait by ninety percent, diminishing Iraq's ability to fight and sustain

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<sup>111</sup> Stewart, *War in the Persian Gulf: Operations Desert Shield and Desert Storm: August 1990–March 1991*, 29; Menos, *Arms Over Diplomacy: Reflections on the Persian Gulf War*, 21, 72.

<sup>112</sup> US Department of Defense, *Conduct of the Persian Gulf War*, 119, 164, 217, 256, 287-289; Menos, *Arms Over Diplomacy: Reflections on the Persian Gulf War*, 21.

<sup>113</sup> Stewart, *War in the Persian Gulf: Operations Desert Shield and Desert Storm: August 1990–March 1991*, 29; Menos, *Arms Over Diplomacy: Reflections on the Persian Gulf War*, 21, 72.

<sup>114</sup> Stephen A. Bourque, *Jayhawk!: The VII Corps in the Persian Gulf War* (Washington, DC: Center of Military History, 2002), 160; Keaney and Cohen, *Gulf War Air Power Summary Report*, 39, 56.

a war..<sup>115</sup> The employment of domain capabilities destroyed Iraq's ability to repel a coalition assault and enabled coalition freedom of maneuver.

During the air campaign, coalition forces supported domain capabilities with a deception plan establishing favorable conditions for the ground attack. Saddam Hussein believed that the ground campaign's main effort was an amphibious assault with supporting efforts advancing into Kuwait from the south. Coalition leadership exploited this belief, permitting media coverage of a Marine Corps amphibious operations rehearsal in the Persian Gulf. Coalition forces dropped 500,000 leaflets on Iraqi defensive positions along the Kuwaiti coast and leveraged clandestine radio stations broadcasting messages reinforcing the impression of an amphibious assault. A US deception cell with decoys and communication emulators set up a tactical assembly area creating an electromagnetic spectrum signature emulating a corps headquarters. The electromagnetic spectrum signature deceived the Iraqis on the actual location of the corps, masking the VII Corps movement to their assault position for the ground attack..<sup>116</sup> The coalition employment of capabilities in the electromagnetic spectrum and information environment deceived Iraqi leadership and forces on the coalition direction of attack.

The coalition employed domain capabilities for five weeks during the air campaign, establishing favorable conditions for the initiation of the ground offensive on February 24, 1991. During the air campaign, coalition forces disintegrated Iraq's air, command and control, and sustainment capabilities while pulverizing defensive positions. Coalition forces devastated Iraq's ability to operate as a capable force in repelling any ground offensive. The coalition's employment of domain capabilities established favorable for convergence of multiple domains during the ground campaign to liberate Kuwait.

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<sup>115</sup> Dannreuther, *The Gulf Conflict: A Political and Strategic Analysis*, 48.

<sup>116</sup> Donald P. Wright, "Deception in the Desert: Deceiving Iraq in Operation Desert Storm," in *Weaving the Tangled Web: Military Deception in Large-Scale Combat Operations*, ed. Christopher M. Rein (Fort Leavenworth, KS: Army University Press, 2018), 223.

## Liberating Kuwait

On February 15, Saddam Hussein expressed interest for the first time in accepting a withdrawal from Kuwait. However, Iraq linked its withdrawal to the full withdrawal of coalition forces from the Gulf, and an immediate end to economic sanctions. On February 19, US leadership declared the air campaign a success, having reduced Iraq's military to the point of collapse. On February 22, the US President presented Iraq with a non-negotiable ultimatum: that Iraq would withdraw from Kuwait in a week with no immediate lifting of economic sanctions. Out of defiance to the ultimatum, Iraqis set fire to oilfields and engaged in a murder campaign throughout Kuwait. President Bush ordered forces to continue operations and initiate the ground offensive as scheduled.<sup>117</sup>

Coalition forces converged multiple domain capabilities in the final phase of Operation Desert Storm. The coalition initiated the ground offensive on February 24, after thirty-eight days of air attacks on targets in Kuwait and Iraq. The US Navy conducted a demonstration in the Gulf as a US Cavalry Regiment conducted a feint in support of the deception plan. Coalition ground forces, arranged across a three-hundred-mile front in the desert, maneuvered from their assault positions meeting minimal Iraqi resistance. Iraqi forces remained in their defensive positions postured to defend against an assault from the sea and the south.<sup>118</sup> On the east side of the front, coalition forces advanced into Kuwait from the south. At the same time, in the west, the main effort conducted a powerful envelopment fixing Iraqi forces in their positions, preventing a mass retreat. Air assault forces launched deep into Iraqi territory to establishing forward support bases. As forces advanced capabilities across the land, sea, air, and space domains converged, allowing

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<sup>117</sup> Dannreuther, *The Gulf Conflict: A Political and Strategic Analysis*, 51-53; Menos, *Arms Over Diplomacy: Reflections on the Persian Gulf War*, 63.

<sup>118</sup> Wright, "Deception in the Desert: Deceiving Iraq in Operation Desert Storm," 223; Goldrick, "The Maritime Elements in the 1990-91 Gulf Crisis," 165; Gary P. Melton, "XVII Airborne Corps Deception," in *US Army Military Intelligence History: A Sourcebook*, ed. James P. Finley (Fort Huachuca, AZ: US Army Intelligence Center and Fort Huachuca, 1995), 346.

operational freedom of maneuver. Naval, air, and artillery bombardment disrupted Iraq's ability to respond to the assault effectively. Satellite imagery increased the accuracy of lethal fires while electromagnetic spectrum jamming disrupted Iraqi command and control. Coalition forces leveraged the space-based capability Global Positioning Systems, assisting ground force maneuver across the desert to their objectives.<sup>119</sup> Lacking air support and exhausted from weeks of bombardment, Iraqi forces began surrendering. On February 23, 1991, Saddam Hussein signaled his readiness to quit as he read statements on Baghdad's radio, declaring a withdrawal per international demands. Desert Storm ended on February 24 as thousands of Iraqi soldiers surrendered, and coalition forces liberated Kuwait.<sup>120</sup>

During the Persian Gulf War from August 1990 through February 1991, political guidance and constraints directed the employment of domain capabilities enabling the convergence of multiple domains during the ground offensive. UN resolutions and US domestic authorization for the use of war powers played a critical role in establishing favorable political conditions for the employment of domain capabilities. Favorable political conditions set conditions for convergence, authorizing the increase of capabilities and the use of force to achieve political objectives.

The coalition forces' ability to converge capabilities in multiple domains increased from August 1990 through February 1991. At the onset of Operation Desert Shield, coalition forces employed domain capabilities defending Saudi Arabia, enforcing economic sanctions, and building combat power. In Operation Desert Storm, coalition forces converged multiple domains reducing Iraq's capability as a fighting force and expelling Iraqi forces out of Kuwait. The

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<sup>119</sup> Dorothy E. Denning, "Gulf War-Infowar," in *Perceptions are Reality: Historical Case Studies of Information Operations in Large-Scale Combat Operations*, ed. Mark Vertuli and Bradley Loudon (Fort Leavenworth, KS: Army University Press, 2018), 112; US Department of Defense, *Conduct of the Persian Gulf War*, 239.

<sup>120</sup> Menos, *Arms Over Diplomacy: Reflections on the Persian Gulf War*, 76; Stewart, *War in the Persian Gulf: Operations Desert Shield and Desert Storm: August 1990–March 1991*, 32.

employment of domain capabilities from August to February established conditions for convergence of multiple domains as coalition forces initiated the ground offensive..<sup>121</sup>

## Section 4: Conclusion

This monograph discusses the development of the MDO concept inquiring how do historical examples might assist the US Army in understanding the application of the tenets of MDO. This project demonstrates that historical examples illustrate how politics guide the employment of domain capabilities in theaters of war, enabling convergence in wars of final victory and wars of limited aims. The monograph uses the criteria: political guidance and constraints on domain capabilities, and the application of domain capabilities across the theater of war to interpret the case studies.

The study applies the criteria over two case studies, Operation Iceberg and Operation Desert Storm. Each of the cases demonstrates the achievement of convergence of multiple domains in time and space. In Operation Iceberg, Allied planners worked within established political guidance and constraints employing domain capabilities across the Pacific theater from December 1941 to April 1945 to achieve convergence during the amphibious assault on Okinawa. Initially, the Europe First approach constrained Allied resources in the Pacific, limiting Allied forces' ability to employ and converge multiple domains capabilities. Allied tactical and operational success increased political support, which increased resources to the Pacific, allowing commanders to mass and employ domain capabilities achieving convergence at the decisive space. From 1941 to 1945, political constraints and guidance gradually increased the Allies' ability to converge domain capabilities across time and space effectively.

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<sup>121</sup> Goldrick, "The Maritime Elements in the 1990-91 Gulf Crisis," 162-164; US Department of Defense, *Conduct of the Persian Gulf War*, 239; Keaney and Cohen, *Gulf War Air Power Summary Report*, 39, 56.

In Operation Desert Storm, political guidance and constraints directed the employment of domain capabilities enabling the convergence of multiple domains during the ground offensive. Coalition forces employed capabilities across the sea, maritime, land, and space domains as well as the electromagnetic spectrum and the information environment from August 1990 to February 1991, establishing conditions for convergence of multiple domains during the initiation of the ground assault. UN resolutions and US domestic authorization for the use of war powers played a critical role in establishing favorable political conditions for the employment of domain capabilities. Favorable political conditions set conditions for convergence, authorizing the increase of capabilities and the use of force to achieve political objectives. At the onset of the conflict, political guidance constrained coalition forces employment of domain capabilities to defending Saudi Arabia, enforcing economic sanctions, and building combat power. As political guidance authorized the use of force, coalition forces converged multiple domains reducing Iraq's capability as a fighting force and expelling Iraqi forces out of Kuwait. The employment of domain capabilities from August to February established conditions for convergence of multiple domains as coalition forces initiated the ground offensive. Forces achieved convergence at the initiation of the amphibious assault on Okinawa in Operation Iceberg and the initiation of the ground attack in Operation Desert Storm because favorable political guidance directed the employment of domain capabilities.

This study highlights similarities between the two operations, which apply to the discussion of MDO. In both case studies, the initial political guidance constrained resources limiting the employment of domain capabilities through time and space. Military planners should understand and recognize how political constraints impact resources. The planners need to be prepared to work with resources on hand to achieve the military objective. With this in mind, a question for further discussion is: How does the joint force achieve and maintain convergence of multiple domains in a resource-constrained environment?

The two-case studies highlight the limitations of the initial response force. In the Second World War, the Allies' initial response force in the Pacific was limited in their ability to conduct operations and converge multiple domains. Similarly, in the Persian Gulf War, the initial response force deployed in August 1991 was limited in their abilities to act as anything but a speed bump against the fourth largest army in the world. Both the Allies and the coalition's ability to conduct military operations and converge domain capabilities increased over time as they increased combat power. This brings up the questions for discussion of how does the initial military response force gain time for the joint force to build combat power in a contested environment? Are forward-deployed troops and prepositioned stock enough to gain time for the buildup of combat power? How can the joint force's initial response force leverage autonomous and semi-autonomous capabilities to increase domain capabilities?

A valuable point for the MDO discussion is how the joint force might build combat power in a contested environment. Operation Iceberg provides examples of how the Allies built combat power in a contested environment. However, it took years to secure lines of communication and establish forward basing. In Desert Storm, the Iraqis did not contest the sea lines of communication. In both cases, the security of sea lines of communication was essential to building combat power.<sup>122</sup> It would be naïve for the United States to think that adversaries are not identifying this as a critical vulnerability. This study recommends the following questions for further discussion or research: Is the United States prepared to fight port to port? What does the battlefield look like if the prepositioned stock never makes it? Can US land forces fall in on partnered forces equipment? In both case studies, planners concentrated combat power at specific locations until there was an overwhelming force. Examples are Leyte for Operation Iceberg and

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<sup>122</sup> Goldrick, "The Maritime Elements in the 1990-91 Gulf Crisis," 164; Bradley, *The Second World War: Asia and the Pacific*, 59.



Saudi Arabia for Operation Desert Storm.<sup>123</sup> One should not assume that the United States will have the ability to build combat power over time in specific locations without enemy interference. As discussed in the concept, adversaries are studying the US military and seeking to exploit its vulnerabilities. A recommended question for further analysis or future discussion is, how does the United States mass combat power and sustain it without concentrating it in one or a few locations?

In summary, this study shows that historical examples can assist the US Army in understanding the application of the tenants of MDO. The study demonstrated how political guidance directs the employment of domain capabilities across time and space to achieve convergence. The political decisions impacted the strategy and the operational approach. Which ultimately impacted the tactical application of the domain capabilities. Achieving convergence presents problems for future planners. They must understand how political guidance establishes conditions in which the planner will have to employ domain capabilities.

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<sup>123</sup> Appleman et al., *Okinawa: The Last Battle*, 41; Menarchik, *Powerlift-Getting to Desert Storm: Strategic Transportation and Strategy in the New World Order*, 2.

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