

Over the course of the next few months, the German-Italian forces would be driven against the anvil of the US army that had landed in Algeria and Morocco, and although they had some successes at places like Kasserine Pass, their acute supply shortages and dwindling manpower meant that it was only a matter of time before they surrendered. The Royal Navy's dominance in the Mediterranean sunk two-thirds of the material needed to sustain the Germans at fighting strength. The last 275 000 of the Axis forces in North Africa surrendered in May 1943.

Sicily and Italy

The invasion of Sicily was aimed at what the British viewed as the "soft underbelly of Europe". It was designed to divert German forces from the eastern front and to foment a revolt against Mussolini's increasingly unpopular regime. Setting off from Tunisia, US and British airborne and amphibious troops, 10 divisions in all, landed in Sicily in July 1943. They faced ineffectual Italian divisions buttressed by two German divisions. The capture of Sicily was the preliminary stroke in the invasion of the Italian peninsula in September. Peninsulas are difficult for attacking forces. Their narrowness makes outflanking manoeuvres difficult and interlocking defence easier. In Italy the peninsula was split by a mountain range that offered obstacles to attacking forces and cover to defending forces. The mountains further forced the Allies moving up the peninsula to divide and advance up the coasts, allowing the Germans to concentrate their forces on their flanks and leave the centre lightly defended. The US command was hesitant about the Sicilian and Italian operations, viewing them as a distraction from the invasion of western Europe into which they would have to commit valuable men and resources. In any event, the Germans would conduct that defence as the Italians signed an armistice with the Allies on 3 September. Allied troops landed on the peninsula on 9 September.

After landing at Salerno, the Allies raced north to capture Naples, but ran into a strong defensive line running the breadth of the peninsula south of Rome, the Gustav Line, where the advance was bogged down. Some of the bitterest fighting of the war took place around the western anchor of the Gustav Line, a strongpoint around the abbey of Monte Cassino. On the eastern flank, British and Canadian forces encountered heavy fighting in places such as Ortona and Sangro. Unable to outflank a line that stretched from shore to shore, the Allies opted to do so through another amphibious landing, this time south of Rome at Anzio in January 1944. Although it achieved strategic surprise, the US commander failed to exploit this success and another Allied advance became bogged down. It would take another five months for the Allies to enter Rome, two days before the landings at Normandy. The German forces retreated to a second prepared defensive line 300 kilometres north of Rome, the Gothic Line, from which they would conduct their defence for the remainder of the war.



Normandy

The grand Allied strategy had, since the entry of the United States, been in one way or another to involve Germany in a two-front war. The hard-pressed Soviet Union became ever more insistent on this and Stalin complained bitterly when the date for the establishment of this second front was postponed. The invasion of Sicily and Italy was partially designed to force the Germans to divert divisions from the eastern front thereby relieving some pressure on the Red Army. Although the Allied operations in Italy did divert troops and material from the force pressing the Soviets, it was not enough to satisfy Stalin or to make a difference on the battlefield. Regardless, the main second front was not to be Italy, but rather in France – Operation Overlord.

The obstacles to landing in force in France were formidable. A number of these were highlighted by the Dieppe Raid of August 1942. A force of 5,000 Canadians landed at the port city of Dieppe to probe its defences. On the surface it was a disaster. Of the 5,000 Canadians and 1,000 British soldiers that landed, less than half returned. Nevertheless, the raid did teach some hard won lessons that would be employed in the planning of Overlord:

- attack open beaches rather than established ports
- attack sand beaches – tanks could not get traction on the shale beaches at Dieppe
- land the bulk of tanks after the beaches are secure
- absolute air superiority is necessary during amphibious operations
- landing craft had to be improved and operated by the navy.

An operation the size of Overlord would take unprecedented logistical planning and material build-up. The plan seemed simple enough. The United States, British and Canadian armies would attack five beaches – Omaha, Utah, Gold, Sword and Juno respectively – on the coast of France supported by paratroop drops behind German lines, and establish a beachhead into which men and material would flow in the days after the landings. From this beachhead the invasion force would break out and drive north and east, securing the coast and advance on Paris. Such an undertaking would take a level of cooperation and coordination between all three branches of three national armies. The civilian population of Britain would have to be mobilized to support the build-up that would happen there. Contact and coordination with the French resistance was necessary as was the inclusion of the **Free French** leadership. Intelligence including troop dispositions and maps of the objectives would have to be gathered. Huge amounts of material would have to be produced and stored. All of this would have to be kept secret from German intelligence. Any commander overseeing such an operation needed to be adept at logistics, diplomacy and strategy. US General Dwight Eisenhower was chosen as Supreme Commander. The British General Bernard Montgomery was given tactical command during the landings.

The defences were formidable, but troubled. Rommel had been placed in command of the Atlantic Wall (as the German positions were known). He disagreed with his superior, Field Marshall von Rundstedt, on how

Free French

French soldiers and citizens who escaped occupied France and organized themselves into military formations under the leadership of Charles de Gaulle. These formations fought with the Allies against the Axis Powers.

best to defend the long coastline. Rommel favoured a defence that sought to destroy the enemy on the beach while they were exposed and had yet to muster their forces. Rundstedt instead wanted to slow the enemy with the beach defence and destroy them as they moved inland with a mobile armoured force kept in reserve.

Rommel ordered the coastal defences strengthened. A million mines a month were laid and the number of landing obstacles was drastically increased. These obstacles on the Normandy beaches were designed to wreck landing craft. If the invasion force was to avoid them they would have to land at low tide, thereby increasing the distance that the exposed forces would have to cover from the waterline. Nevertheless, the main defensive effort would have to come from armour. Obviously there was not enough to cover the entire 2,600-kilometre front and so some sort of an estimation of where the landings would take place was required. Hitler intervened personally and split the tank forces between the two generals and further ordered that the reserve could not be used against an invasion force without his personal order. This almost guaranteed a delayed and weak response to an Allied landing at Normandy.

The obvious invasion route was where the English Channel was at its narrowest, the Pas de Calais, and the Allied command did everything they could to encourage that belief. The Allies constructed a fake army, complete with empty barracks, wooden tanks and aircraft opposite the Pas de Calais. Deliberately false radio traffic conveyed the notion that this was where the invasion would take place. The deception went on until the last moment when the Allies dropped "dummy" paratroopers ahead of the actual drops in Normandy. The belief was that once the Germans discovered the paratroopers at Normandy were fake they would conclude that the actual drop was going to take place at the Pas de Calais and would move out of Normandy ahead of the real Allied drops. The Allied air forces concentrated more tonnage of bombs in the area around and east of the Pas de Calais than around Normandy.

By the time the Allied invasion force was ready in May of 1944 it was an impressive assembly. From May 1942 to May 1944 the Allies had managed to muster:

- 1.5 million US, British and Canadian soldiers
- 5 million tonnes of supplies
- 12 000 aircraft
- 1,000 locomotives
- 20 000 railroad cars.

The invasion force itself included:

- 2,500 naval craft
- 4,000 landing craft
- 170 000 soldiers, 18 000 paratroopers
- 1,000 paratroop transport aircraft.



▲ General Eisenhower talking with paratroopers before they drop into France ahead of the Normandy landings. What role did the paratroopers play in the D-Day invasion?

The invasion began on 6 June 1944. The night before, three divisions of British and US paratroopers dropped behind enemy lines to secure bridges and other strategic points with mixed success. The drops were helped by the confusion that seemed to grip the defending forces and their slow response. The experiences of the amphibious forces were varied.

- **Utah Beach:** The 23 000 US troops that landed on Utah, a 5-kilometre stretch of sandy beach on the extreme west end of the Normandy landings, met limited resistance, suffering 197 casualties.
- **Omaha Beach:** The experience of the 34 000 US troops that landed at Omaha was considerably different. Confusion and heavy seas conspired to push many landing craft off course. The "swimming" Sherman tanks foundered in the seas. Omaha was also defended by the most experienced of the German troops at Normandy that day. High banks overlooked much of the landing beaches giving the Germans clear fire at the approaching infantry. After a day of heavy fighting the invaders had established a beachhead at a cost of 4,650 casualties.
- **Gold Beach:** Twenty-five thousand British soldiers attacked the 8-kilometre beach at the centre of the Normandy invasions. The airborne drops behind their positions disoriented the inexperienced defenders. Nevertheless one fortified village provided a stout defence causing heavy casualties on some of the attacking units. By the evening the British were moving inland and linking up with the attackers from Sword and Juno beaches. The British suffered close to 400 casualties.
- **Juno Beach:** The Canadians stormed the beaches with 21 000 men and at first met stiff resistance, primarily from pre-sighted killing zones on the beach and landing obstacles that the engineers had been unable to clear. By evening they had moved inland to link

up with British forces from Gold Beach. On the day the Canadians suffered some 1,200 casualties with close to 350 dead.

Class discussion

How might the Germans have repelled the Normandy invasion?

- **Sword Beach:** The 23 000 troops that came ashore at the far east end of the landings encountered little resistance, but once ashore did face a counter-attack by German tank forces. Allied air superiority blunted this attack. In all, the British suffered 600 casualties at Sword.

The Road to Berlin

From the surrender of the German Sixth Army at Stalingrad, the Red Army continued to grow in both men and material. With this growing strength it marched west, reconquering territory that had been occupied by the Germans since June 1941. The devastation and terror that the Germans had meted out during their occupation was becoming more evident as the Russians advanced, fueling their motivation and shaping their own attitudes on occupation.

The Germans, however, were not finished and planned a massive advance around the Soviet city of Kursk. The result was the largest tank battle in history. The Soviets, forewarned of the attack, pounded the German forces with artillery as they mustered for the advance. As the 1,900 German tanks moved forward they were drawn into an elaborate defensive system and destroyed. The ensuing Soviet counter-attack completed the Red Army's victory. Massive engagements such as Kursk only served to drive home the point that the Red Army could suffer higher losses than their opponent and still claim victory. They were dramatically outproducing their enemy. By October the Red Army was pushing west with over 4 million men and 4,000 tanks reaching Warsaw by the end of August 1944.

The western Allies were themselves making strides toward the Reich. Captured channel ports such as Antwerp allowed for easier supply. An attempt to capture the Rhine bridges intact through a coordinated airborne and armoured operation known as Market Garden fell short of its objectives in September 1944 which would mean that the push across the Rhine into the German heartland would have to wait until the spring.

Berlin itself would fall to the Red Army in early May after a methodical advance through the city from all directions. On 2 May the city was in their hands.

The war at sea

Battle of the Atlantic

The Battle of the Atlantic refers to the ongoing effort to bring supplies – food, munitions and men – across the Atlantic from the factories and fields of North America to Britain. The island nation required over a million tonnes of imports each week to survive – half its overall need – and had a massive merchant fleet of over 3,000 ships to do this. For every 14 merchant ships, the Royal Navy had one escort vessel. In 1939 and 1941 this was generally sufficient to deal with the threat provided by the German navy.



▲ An Allied tanker burns and sinks after being torpedoed. To what extent was Britain dependent on imports to survive?

The *Kriegsmarine* as it was known saw a concentration on large surface vessels during the rearmament period, a strategy that continued in the early years of the war. Spectacular losses to Germany's surface fleet such as the sinking of the state-of-the-art battleship *Bismarck* and the scuttling of the "pocket" battleship *Scheer*, helped convince the German high command that the more affordable – and more successful – U-boat programme should be expanded in the hope of strangling her island enemy. Germany's U-boat fleet reached a peak of 300 vessels in 1942, which also marked the height of its success. Rather than lone boats hunting and attacking on their own, the U-boat fleet adopted a "Wolf Pack" strategy in which the fleet would stretch out across established shipping lines. Once a U-boat made contact with an Allied convoy they would radio their location to other boats. When sufficient boats, at times reaching 40 vessels, had convened on the convoy they would attack. Multiple attacking vessels made it far more difficult for the escort vessels to protect the entire convoy.

ATL Research skills

The armies that moved across Europe and North Africa during the Second World War consumed enormous amounts of natural resources. At the same time, land and sea operations made the import and export of materials very tenuous. In fact, the need to secure these resources often dictated overall strategy. To get an idea of the needs of the combatants, complete the following table for Germany, Britain, the USSR, the USA and France and answer the questions that follow.

Resource	Source	Strategic implication
Food		
Iron		
Coal		
Oil		

Which country was in the best situation in terms of resources? Which was in the worst?

How does the information in the table help to explain the strategic decisions made by each country during the war?

Over time the Allies defeated the U-boat threat through a combination of production and technology. Once the US shipbuilding industry was mobilized for war and innovations such as the Liberty ship, built in components around the US and shipped to the coast for assembling, were developed the Allies were building shipping tonnage far faster than the U-boats could sink them. The limitations of anti-submarine technology such as ASDIC (a form of sonar) and depth charges were eventually improved. Anti-submarine aircraft steadily increased their range, reaching far out into the Atlantic to give effective air cover to Allied convoys. By the end of 1943 the Allies were sinking U-boats twice as fast as the Germans could replace them. By the end of the war 75% of all German submariners had been killed.

Technology and war: radar

In the mid-1920s experiments had established that it was possible to measure the distance to an object by timing the return of radio waves bounced off the object. The military applications were soon evident. By the time the war broke out, Britain and Germany had developed radar stations to detect incoming aircraft. Radar's accuracy was refined throughout the Second World War as was the scope of its application. Developments such as the cavity magnetron allowed for the reading of higher frequency radio waves, which proved more accurate. Eventually radar was placed

on aircraft to find targets at sea. It was placed on ships to discover surfaced submarines. It was used to aim anti-aircraft guns and find bombing targets through cloud cover.

As with all military technology, each advance in radar prompted the development of countermeasures. Artillery shells that burst in the air releasing fragments of aluminium presented multiple reflective surfaces for the radar to bounce off thus confusing it. Radar detectors mounted on aircraft could alert crews as to when they were being hit with radio waves directing anti-aircraft fire.

Technology and war: anti-submarine warfare

Anti-submarine warfare can be divided into detection/defensive technology and offensive technology. The Allies had discovered the defensive benefits of the convoy system during the First World War. It allowed a comparatively small escort force to protect a greater number of ships. By the end of the war, Allied convoys in the Atlantic grew to over 150 ships. The move by Allied navies toward larger convoys came from the statistical analysis that suggested the number of sinkings in a convoy attack depended on the number of U-boats attacking rather than the size of the convoy, theoretically allowing for larger convoys.

Submarine detection initially relied on ASDIC or sonar developed during the First World War. Although ASDIC was relatively successful in detecting submerged submarines, it could not do so with surfaced U-boats. Escort vessels were eventually equipped with maritime radar sets, which made this easier. Hydrophones were listening devices that could pick up faint sound waves emitted from submerged U-boats. Anti-submarine aircraft used advanced technology such as magnetic anomaly

detectors that could detect the change in magnetic fields caused by a submarine hull to find their prey.

Once detected, escort vessels would launch an attack on the submerged U-boat. The primary weapon used by the Allied navies was the depth charge, a waterproof explosive charge detonated by a pressure fuse. Early in the war depth charges were dropped off the stern of ships or thrown by single charge launchers, requiring the attacking ship to pass over the submarine several times in order to either sink it or force it to the surface. The Hedgehog was an improvement in that it fired 24 projectiles 80 metres ahead of the ship and detonated on contact. This meant that the U-boat had far less time to escape once its own hydrophone heard the approaching ship.

Long-range aircraft, which could spot and attack U-boats, were highly effective in protecting convoys. As the war progressed the range of aircraft such as the Sunderland Flying Boat and the PBY Catalina increased, as did their ability to attack U-boats. Devices such as the absolute altimeter meant that aircraft could fly at far lower altitudes with safety, increasing the accuracy of their attacks.



The air war

Battle of Britain

When France surrendered to Germany in June 1940, the German high command expected Britain to ask for terms of peace. Churchill, now the Prime Minister, would hear none of this. To say that Britain was alone does a disservice to Canada, Australia and New Zealand who stood by her. Nevertheless, the fact that Britain would not negotiate meant that a military solution to her resistance would have to be found. That solution became known as Operation Sealion.

Sealion planned Germany's amphibious invasion of Britain. To call it a plan is generous; Sealion lacked the meticulous planning that Germany's other operations had entailed. Even had it been given the attention required, Germany did not have the naval resources to control the channel long enough to get an invasion force across. Hitler and Goering did, however, believe that they had the resources to control the airspace over the islands and the channel, also a prerequisite to invasion. The Luftwaffe was given the mammoth task of destroying Britain's coastal defences, eliminating the RAF's ability to operate, and preventing the ability of ground forces to operate once the invasion was underway. This attempt would become the Battle of Britain.

From the beginning the RAF enjoyed certain advantages over the Luftwaffe.

- British radar installations could detect incoming aircraft.
- The Luftwaffe had suffered greater losses in the Battle of France than the RAF.
- The British Spitfire, though fewer in number than the Hurricane, was equal, if not superior, to the German Bf 109 Messerschmitt.
- The Hurricane, although an inferior fighter, could be produced in large numbers quickly. In all the British outproduced the Germans in fighter aircraft at a rate of 25:7.
- As much of the aerial combat took place over or close to Britain, salvage of damaged aircraft and recovery of pilots was easier than it was for the Luftwaffe.
- Germany had no heavy bombers suited to destroying large urban centres or industrial facilities. The Luftwaffe would rely on medium-sized level flight bombers designed to support ground forces – the “flying artillery” of *Blitzkrieg*.

Class discussion

To what extent should merchant marine sailors (civilian sailors who crewed the cargo and tanker ships) be entitled to the same benefits and honours as sailors in the navy?