



The Army constructed port facilities along the southeastern coast of France near the existing ports of Bassens and Bordeaux. This port became known as American Bassens. Once operational, it became one of two principal ports for the American Expeditionary Forces. (Photo courtesy of the Army Quartermaster Museum)

World War I as a Transition Point for Army Sustainment

The Army's logistics transformation during World War I helped the United States emerge as a world power.

■ By Leo P. Hirrel

In April 2017, the Army observed the 100th anniversary of the U.S. military's entry into World War I. It is important to recognize how this conflict helped the United States become a world power. The Army entered the war only partially comprehending the requirements for organizing and maneuvering a multimillion-Soldier force in an

overseas theater. By the close of that war, the Army was a truly modern force.

The transformation in sustainment constituted a critical part of the emergence of the Army as a world-class power. When the United States entered the war, Army sustainment rested on an archaic bureaucratic system that was best-suited for sup-

porting a relatively small peacetime Army.

An embarrassingly poor performance against Spain in 1898 led to some reforms in the support structure. One change was creating the Quartermaster Corps in order to combine the Subsistence, Pay, and Quartermaster Departments and to militarize logistics supply and ser-



Quartermaster Soldiers from the 77th Division complete paperwork in a tent on Sept. 9, 1918. (Photo courtesy of the Army Quartermaster Museum)

vices. Overall the Army was woefully unprepared for the logistics and personnel issues associated with a modern war, especially a war fought overseas. By the close of the war, the Army had a credible sustainment system.

To place the magnitude of the achievement in perspective, in 1898 the Army experienced incredible difficulties in moving a single corps from Tampa, Florida, to Cuba, and then it delivered insufficient supplies once in Cuba. In contrast, by the close of World War I, more than two million Soldiers were moved to and sustained in France. This was by far the largest overseas deployment anywhere in the world up to that time; it was about four times the size of the British deployment during the Boer War.

Learning to Harness Industry

Problems with industrial mobili-

zation developed very quickly during World War I because of the lack of preparation. Without a site selection plan, construction of the necessary training camps took longer than expected. The Army missed an opportunity to purchase wool while it was available, and shortages of blankets and warm clothing were compounded by the exceptionally cold winter of 1917 and 1918.

U.S. factories lacked the dies, jigs, and precision tools for the mass production of munitions, including rifles, artillery, tanks, aircraft, and ships, forcing U.S. allies to make up the shortfalls until the end of the war. Wartime railroad congestion was so bad that it paralyzed the East Coast in December 1917.

Bureaucratic dysfunction made the difficult task of arming the nation even worse. Up to this time, supply systems were stovepiped to the extreme. Not only were the Army and

Navy competing against each other for commodities, but bureaus within the War Department were competing against each other for scarce supplies. Contracting prior to the war employed a highly inflexible bidding system at fixed prices. This system worked in peacetime but not in the uncertainties of war.

At the outset, President Woodrow Wilson was reluctant to use his powers. He even initiated a program to build wooden ships to avoid having to use his authority to commandeer steel for shipbuilding.

Gradually the nation learned how to correct these deficiencies. Reorganizations within the War Department and within the larger government bureaucracy provided for more efficient operations. By 1918, President Wilson gave his War Industries Board sufficient backing to cajole industry into cooperation. Giving the war effort a higher prior-

ity for raw materials, production, and transportation introduced order into the chaos.

By the summer of 1918, the United States was reaching its potential for war production. In October, the war-time Emergency Fleet Corporation produced 33 percent more ships in one month than the nation produced during the entire year of 1916. If the war had lasted into 1919 as expected, the surge in productivity would have had noticeable results. In the interim, the United States depended on its allies for industrial support.

Overseas

At the time of the U.S. entry into the war, the Army lacked the operational experience and doctrine needed to conduct a major war. It had some limited operational experience in Mexico, the Philippines, and other areas, but nothing comparable to the challenge it would soon face.

Field service regulations (doctrinal publications of that time) offered only vague guidance about how a support structure should work in a major war. In fact, the publications contained only nine pages describing the entire line of communications.

Not surprisingly, the efforts of the American Expeditionary Forces (AEF) to create a workable sustainment system involved initial confusion, often causing the troops to suffer from the poor support. In time, the AEF addressed issues of organization, but it frequently reorganized throughout the war. Performance steadily improved, and by October 1918, the U.S.-operated ports accepted more than 900,000 tons of supplies in a single month.

The AEF entered the war expecting to rely on the French to operate ports and railroads. Upon arrival in France, however, the AEF realized that the French transportation system was too stressed by the war to provide this support.

Consequently, the AEF assumed increasing responsibility for operating French ports and railroads and improving existing facilities. With-

out previous experience in these operations, the Army relied on civilians to manage these projects.

Closer to the front, the AEF faced logistics challenges that Soldiers would not have contemplated during the frontier days. The introduction of motor vehicles helped with transportation problems, but their use introduced the problems of petroleum resupply, maintenance, and repair parts.

Because vehicles lacked standardization, repair parts became a nightmare. So, the Ordnance Department experimented with a mobile ordnance repair shop, thus introducing the concept of field maintenance. Graves registration and field laundry became military functions for the first time. Army cooks employed the new mobile kitchen trailers to prepare hot meals near Soldiers.

Throughout the war the Army continued to improvise with new types of organizations to meet unexpected demands, such as forestry units to provide the necessary lumber for construction.

Because of difficulties in transporting supplies across the Atlantic, the AEF relied on the French to an unprecedented degree, similar to the host-nation support used in today's operations. Upon Gen. John J. Pershing's insistence, the AEF developed a method of centralized management for overseas purchases to prevent the different bureaus from driving up prices by competing against each other.

The AEF also found ways to purchase supplies from neutral nations. French laborers, especially women, did invaluable service by operating warehouses, repairing textiles, producing macaroni, turning sheet metal into cooking utensils, and a variety of other tasks. All of this effort reduced the shipping requirements for the AEF.

Undoubtedly, the wide variety of support tasks came as a surprise to Soldiers accustomed to thinking of warfare in terms of enemy engagement. To their credit, members of

the AEF sustainment community quickly recognized the importance of their work and adjusted to provide the necessary support to the fighting forces.

Human Resources Support

Functions that today might be termed human resources support matured significantly under the direction of the Adjutant General's Department. During World War I, the Army needed to find ways to match Soldiers to the multitude of skills required beyond the combat functions, so they employed IQ and occupational skills testing.

The Army also needed a system to send replacements to the divisions during the fight. With some difficulty, the Army developed a system that began with replacement training centers in the United States and ran through to replacement depots in Europe. Unfortunately, the system did not mature until after the war, but the model served well for the remainder of the century.

Other personnel innovations included a central records office in theater, the use of serial numbers, and the Army's assumption of postal duties. Functions that today might be called morale, welfare, and recreation were handed to the women and men from volunteer organizations, but the lessons were remembered when the Adjutant General's Department created the Special Services Division for the purpose of troop morale.

Significance

By the end of the war, the AEF had developed into a credible fighting force capable of successfully engaging the Germans in some of the most difficult terrain in France. The transformation of the Army's sustainment structure was a major part of the development of the United States into a world power.

Certainly the organization had shortcomings, but American Soldiers had the means to do their jobs. It is difficult to imagine how the AEF could have fought in the final bat-



Workers at the Nevers Depot move subsistence in April 1918. Feeding an Army that eventually reached two million Soldiers required extensive manual labor. (Photo courtesy of the National Archives)

tles of 1918 if the various supporting branches had not rapidly adapted to modern warfare.

Effective sustainment operations in World War I had further implications. At the time of the U.S. entry into the war, French and British allies proposed blending U.S. Soldiers into their own formations because they were unsure of their new ally's ability to manage large operations. The Army's immature sustainment capabilities in 1917 were an important consideration. By developing the capacity to support the AEF, rear-area Soldiers enabled the fielding of an independent Army that would ensure that the United States had a voice in the post-war peace conference.

The Post-War Period

In the years after World War I, the Army temporarily returned to its previous status as a small force, and

investments in sustainment diminished accordingly. However, the war left an intellectual legacy for future senior leaders on the intricacies of supporting a huge Army.

With the establishment of the Army Industrial College in 1924, officers had the chance to consider the problems of homefront mobilization and wholesale logistics. The painful lessons in moving supplies led to the creation of the Transportation Corps in 1942 as a permanent branch of the Army.

Lessons from World War I helped President Franklin D. Roosevelt and his advisers understand the need for a pre-war mobilization program in the period before the U.S. entry into World War II. Leaders also applied tested organizational and doctrinal solutions to the new war. Military logistics and personnel operations are never perfect, but in the 1940s, the

Army was far better prepared for the next global conflict.

Members of the sustainment community of World War I made two tremendously important contributions to the U.S. emergence as a world power: they provided the means for the AEF to function as a separate army, and they left an intellectual sustainment legacy that enabled the Army to enter World War II as a premier fighting force.

Dr. Leo P. Hirrel was the Quartermaster School historian from 2011 to 2017. He is the author of the recently published "Supporting the Doughboys: U.S. Army Logistics and Personnel During World War I," which is available for free at [http://www.armyupress.army.mil/Portals/7/combat-studies-institute/csi-books/Supporting-the-Doughboys-\(Web\).pdf](http://www.armyupress.army.mil/Portals/7/combat-studies-institute/csi-books/Supporting-the-Doughboys-(Web).pdf).