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TECHNICAL SERVICES DIVISION

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AND CTO

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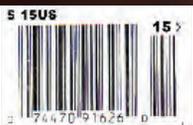
STEVE MARINI,
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GENERAL MANAGER,
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ENSURING THE RELIABILITY
OF MISSION-CRITICAL
MILITARY SYSTEMS





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*The annual listing of 10 companies that are at the forefront of providing
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COVER STORY

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ENSURING THE RELIABILITY OF MISSION-CRITICAL MILITARY SYSTEMS

By Justin Smith

“You will not find it difficult to prove that battles, campaigns, and even wars have been won or lost primarily because of logistics.”— General Dwight D. Eisenhower, Former U.S. President

Indeed, many of the greatest successful military operations have been attributed to their superior and innovative logistics approaches. Take Alexander the Great’s march across Asia, for instance. While the conventional practice for marching armies was to employ additional slow-moving supply carts to carry provisions, Alexander equipped his soldiers with lighter backpacks for carrying supplies—eliminating the need for the bulky supply carts and creating a fast and flexible military supply chain. This innovative approach enabled him to move his military assets quickly and flexibly to the right place at the right time.

Logistics encompasses the fundamental planning of every program to define its Concept of Operations (CONOPS)—from design to production to sustainment. Introducing innovation at the convergence between design and logistics is what made Alexander the Great’s solution a novel concept that yielded successful results.

Fast forward to today, achieving those successes translates into mission readiness over the span of a program’s life and can be achieved with effective product lifecycle development. The assimilation of design,

planning, testing, logistics analysis (now known as product support), maintenance documentation, and mission systems' integration is the hallmark of what makes product lifecycle successful. Interestingly, these are the exact capabilities Dayton T. Brown, Inc. (DTB) has been providing to the U.S. Department of Defense (DoD) since 1950. An indisputable innovator in military logistics and a leading provider of product lifecycle support services such as testing, engineering, and publications, DTB has cemented its cornerstone as a reliable partner to all the six branches (Army, Marine Corps, Navy, Air Force, Coast Guard, and Space Force) of the U.S. military.

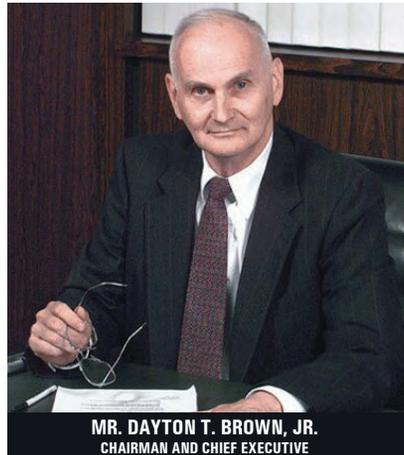
For over 70 years, the company has remained synonymous with the pursuit of excellence and customer satisfaction, and today, it continues its legacy of innovation in service delivery. The U.S. Navy, especially, relies on the company's innovative and industry-leading logistics approaches when moving its mission-critical assets to strategic positions across the world.

"Our motto is service first, ask questions later," affirms Jim Kelly, Executive Vice President, DTB. "For us, it is not just about completing the task at hand, but also going above and beyond in solving any other challenges our clients might be facing to the best of our ability."

THE ROOTS OF EXCELLENCE

The foundation of the company can be traced back to Dayton T. Brown, Sr., a pioneer in the field of aviation. A graduate from MIT, he began his career at the Naval Aircraft Factory that was in charge of developing the first naval dive bomber aircraft. His next stop was Detroit Aircraft Corporation (a majority shareholder of the Lockheed Corporation at the time), where he became the chief engineer. There, he went on to design—and direct the production of—several crucial naval aircraft used in the Second World War. Brown then joined the Grumman Aircraft Engineering Corporation as the senior designer and designed the renowned 'Tadpole' and 'Kitten' aircraft.

Midway through his career, he realized the need for robust testing to counter the equipment reliability problems faced by the U.S. Navy during the Korean War. So DTB was established in 1950, and the company began to test and ensure the reliability of military assets, including armaments, suspension equipment, arresting gear of carrier aircraft, bomb racks, and rocket launchers. But as the military equipment became more sophisticated, Brown added new testing capabilities such as shock and vibration and heavy structural and fatigue analysis to the company's service portfolio to help the stakeholders determine the performance of their assets under extreme real-world conditions.



In 1978, however, Dayton T. Brown, Sr. passed away and Dayton T. Brown, Jr. took the helm, boosting his father's legacy and driving the company to greater heights. He added many new capabilities to the Engineering and Test Division and expanded DTB's footprint throughout the U.S. with offices in Shelton, CT, Hollywood, MD, and Wichita, KS. Under his leadership, new equipment was purchased to further augment the company's offerings. DTB's pursuit of innovation was rightfully rewarded when its Engineering and Test Division (formerly called the Laboratory division) won a major Navy Test Stand contract, the T-10. A contract of this scope occurs within the Navy on a 15-to-20-year

cycle. This multi-year contract had delivery requirements that extended into the twenty-first century for the design, manufacture, qualification test, and delivery of four "first article" test stands with production orders of 60 HCTS units. Propelled by such accomplishments, over the next few years, the company continued its rapid expansion. Notably, Dayton T. Brown, Jr.'s foresightedness enabled the company to flex with the changing economic environments and marketplace needs.

Fast forward to today, DTB operates via its three branches—Engineering and Test Division, Technical Services Division, and Mission Systems Division—whose operations are widely diversified yet complemented by each other. These branches of DTB are ISO9001 and AS9100 registered, ITAR approved and have government approved purchasing, property and security systems in place.

MEETING THE NEXT GENERATION OF DOD PRODUCT LIFECYCLE NEEDS

DTB's Engineering and Test Division currently employs the country's largest independent testing laboratory to deliver a full spectrum of testing capabilities. Whether it is testing the performance of mission-critical systems under the influence of environmental factors or their ability to withstand vibration or electromagnetic interference, customers can always depend on DTB's testing excellence. "By leveraging our services, stakeholders from the U.S. Navy, or any of the other military branches or its contractors, can analyze the reliability of their mission-critical equipment before deploying them in the field," mentions Steve Marini, Senior Vice President and General Manager, Engineering and Test Division, DTB. "We can also ascertain the safety of different assets, including weapon systems, under different conditions." Moreover, the Engineering and Test Division has also renovated its structural test lab, bringing new functionalities to deliver full-scale aircraft static and fatigue testing. This

enables clients to examine the effect of dynamic forces (wind) or static forces (weight of cargo) on different parts of the aircraft, and thus, take necessary measures to reinforce their equipment and ensure complete reliability during flight.

These offerings are further complemented by the division's standalone engineering services, making testing and product redesign possible even outside the labs at client sites, including naval bases. Marini adds, "We can design and fabricate specialized test equipment, calibrate the relevant instruments, and even assist our clients in preparing the test procedures." The division also offers field data acquisition for analyzing asset performance in the field, and based on the results, customers can engineer product improvements. For legacy systems without available CAD models, DTB can reverse engineer spare parts that are no longer available to the government.

On the other hand, DTB's Technical Services Division has become quite popular for its technical manual, logistics analysis, and maintenance planning services. The division's publication and illustration services include technical writing, technical illustration and graphics, data conversions, parts listing, and S1000D (an international XML specification for preparing, managing, and publishing technical information for a product) training, authoring, and support. So, if and when clients develop a new hardware or platform, the Technical Services Division prepares all the documents regarding that asset according to industry standards and DoD requirements. "These offerings ensure that clients have all the information and knowledge regarding their hardware (or components) ready at hand, whether it is for maintenance or upgrades later on," states Nelson Cubano, Vice President and General Manager, Technical Services Division, DTB. While the division's publication and illustration services are considered unparalleled, its logistics analysis has also proved extremely reliable for the military. In fact, whenever the U.S. Navy—or any of the other military branches—need maintenance, the Technical Services Division plays an instrumental role performing the analysis that ties engineering to the maintenance procedures in technical manuals. Ultimately, this allows critical assets to operate safely, improving mission readiness.



Equally noteworthy is the company's Mission Systems Division, which is aimed at providing support for the U.S. Navy's ISR (Intelligence Surveillance Reconnaissance) capabilities. The division specializes in designing, building, and supporting mobile SCIF (Sensitive Compartmented Information Facility) trailers that are deployed worldwide. Often these mobile SCIF trailers are used as ground operating stations for UAVs. These air mobile, self-sufficient, electromagnetically shielded trailers make it easy for the naval stakeholders and other DoD clients to maximize their assets quickly and effectively, even in relatively remote locations. "Together, the capabilities of our three divisions ensure that our clients have access to end-to-end, military-grade product lifecycle services," notes Bill Bradshaw, Vice President, Mission Systems Division, and CTO, DTB.

THE ART OF EXCEEDING CLIENT EXPECTATIONS

Owing to such reliable testing, engineering, and publication capabilities facilitated by DTB, public and private stakeholders in the defense sector have been able to significantly boost their outcomes. Illustrating this point, Kelly highlights the company's role in helping the U.S. Navy's Seventh Fleet in transporting the ground control station for the MQ-4C Triton—a high-altitude, long-endurance unmanned aerial vehicle (UAV)—from its base at Pax River, MD, to an overseas location requested by the Navy. The Navy chose to go with DTB's industry-leading services to complete its logistics operation at minimum cost and maximum efficiency.

It turned out to be the best possible choice as DTB arranged the necessary logistics in the shortest possible time to outfit and transport the SCIF trailer. Currently, these trailers—containing up to 20 racks of electronic equipment—are being loaded onto C-17 transport aircraft and shipped to the FOBs around the globe. DTB has also outfitted the trailers with state-of-the-art security systems, cabling, and other equipment required for a quick and safe transit. The self-contained power systems installed by DTB facilitate independent operation in remote locations. And the RF shielding and acoustic dampening capability of the mobile trailers guard against electronic surveillance and suppress data leakage.

driving force behind our efforts to ramp up the testing standards and reliability of mission-critical equipment,” he adds. In fact, DTB’s workforce, whenever working with clients, solicits and provides feedback, creating a sustainable improvement loop that not only enables the company to continually upgrade its services but also to help clients pinpoint and resolve their pain points. Besides, it also allows the company to ensure that all expectations are met throughout the engagement.

“For this very reason, when clients seek our services, they know DTB goes above and beyond just solving their specific problems,” says Ivette Damish, Vice President, Business Development, Technical Services Division, DTB. This trust, in turn, has garnered the company some of the biggest clients



At this juncture, Kelly also shares another instance from his tenure as the VP and General Manager of the Technical Services Division. “The clients, Sikorsky Aircraft and General Electric, had chosen us to produce all the technical publications for the heavy-lift cargo helicopter, CH-53K,” he says. Moving from System Development and Demonstration (SDD) to System Demonstration Test Articles (SDTA) and currently into Operational Test and Evaluation (IOT&E) phases, DTB created all the organizational and depot manuals for the aircraft in the latest S1000D specifications tied to the logistics database DTB created for the engine. As the program matures, CH-53K enjoys the advantages of having up-to-date and precise technical publications, especially for its maintenance and upgrade operations.

Penning such success stories, DTB is quickly becoming a linchpin for many of DoD’s logistics and testing operations. According to Russ Presswood, Executive Director of Sales for the Engineering & Test Division, DTB, this streak of success is not just the result of the company’s cutting-edge product lifecycle services. “We have some of the brightest engineers, writers, and equipment specialists, who collectively form the

in the industry. Even now, the company is working with Blue Origin—the aerospace manufacturer and sub-orbital spaceflight services company—and providing them with state-of-the-art testing services for their spaceflight programs. In this instance, DTB’s Engineering and Test Division and Technical Services Division are working in symbiosis to develop test plans, streamline equipment testing, produce qualification test procedures, and quickly create test reports.

Even in the face of the pandemic, the company had adapted quickly and seamlessly through remote technology. With employees working remotely from 25 states, DTB has not missed a beat in its workflow. Moreover, the company’s reliability during the COVID-19 pandemic has not only enabled it to strengthen existing customer trust but also to win over new clients. In the next spurt of growth, DTB will focus on expanding the service capabilities of its three divisions as well as its operating locations. “Our innovation path is predicated on assessing the evolving challenges of our clients, enhancing our capabilities accordingly, and ultimately preparing the clients to counter any problems they might face,” concludes Kelly. [ER](#)

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