Corpus Christi Army Depot

Annual Report 2011

One Team, One Fight, One Future

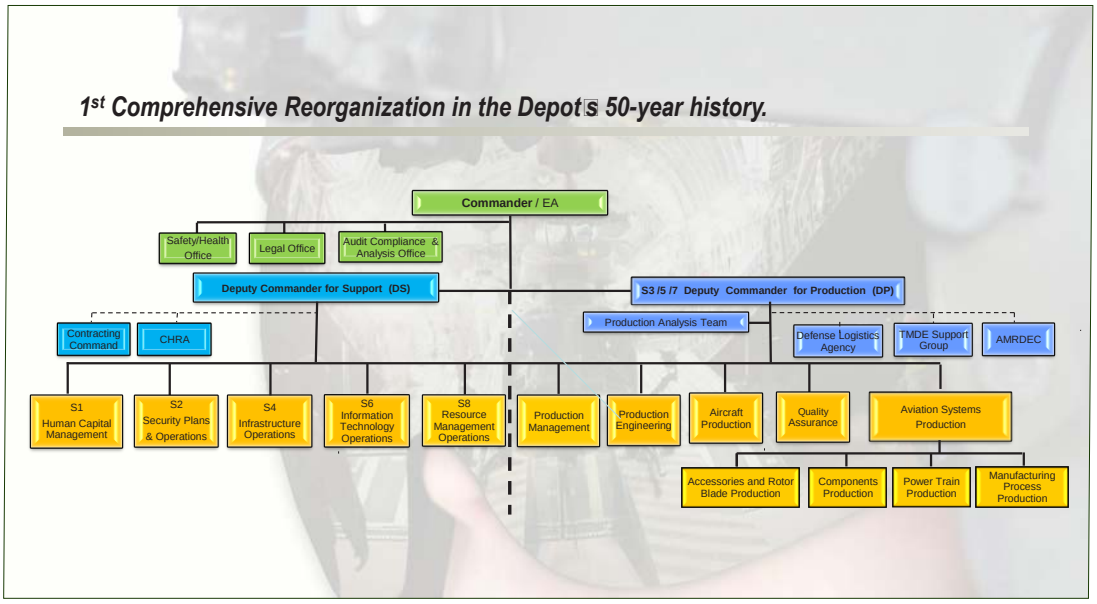
Corpus Christi Army Depot

Corpus Christi Army Depot is the industry leader of repair and overhaul for helicopters, engines and components in Army Aviation. As the largest rotary wing repair facility in the world, the depot excels by delivering the highest quality product on time at the lowest possible cost.

CCAD is focused on the customer, providing global support with accident investigations, troubleshooting and repairing deployed aircraft anytime, anywhere. Support for the Warfighter ensures maximum sustainability through interactive training programs available at the depot. Soldiers work alongside depot artisans as they learn how to repair deployed aircraft in their unit.

Though CCAD remains the preferred business solution for rotary wing repair and overhaul, it continues to find ways to reduce cost while increasing production and maintaining superior quality of all its products. Cost-consciousness has become a culture at the depot with leaders, office professionals and artisans finding ways to lower costs at all levels.

Since 2003, the depot has saved taxpayers over $20 billion through a number of programs designed to cut time and costs while making smarter choices in workload.



A focus on continuous improvement means that CCAD takes a critical look at its processes and programs for opportunities to reduce turnaround time and cost while increasing performance to leverage its return on investment.

State-of-the-art technology and systems maximize proficiency throughout the organization while a focus on leadership development and employee empowerment guarantees a workforce that truly cares for the Warfighter. Dynamic, public-private partnerships also increase efficiency of operation at CCAD. Combined, these elements achieve the highest possible return on capital assets and investments.

Under the highest level of certification, CCAD has completed world-class maintenance on more than 544 aircraft; 2,986 engines and 111,785 helicopter components since 2003. CCAD continues to adapt to a change in military tempo by utilizing the best business practices within the commercial sector to posture itself as an elite organization prepared to handle the needs of the future.

Corpus Christi Army Depot operates as a premier business partner within the Aviation and Missile Command and Army Materiel Command to support every Soldier, Sailor, Airman and Marine.

A Letter From the Commander

Welcome to Corpus Christi Army Depot. We are excited to share with you our annual report where we highlight how the depot supports our customers while maximizing taxpayer dollars. We will take a look at the last 50 years to see how we have grown as we position ourselves to support our customers in a time of uncertainty and unusual budget constraints. CCAD has invested in new technologies and layout modernization to show the true cost consciousness that we believe makes us a world-class government owned and operated maintenance, overhaul and repair facility.

Fiscal Year 2011 marks a turning point as the depot finishes a comprehensive reorganization and streamlined business processes. We focus on increasing productivity, balancing the cost and schedule, while ensuring uncompromising quality. Empowerment through employee-led change teams makes industry challenges surmountable. We continue to focus our strategic planning efforts to ensure CCAD evolves to the needs of the Warfighter and become our customers' best value and preferred solution.

We invest in the intellectual capital of our employees by taking an organic approach to senior leadership. The focus of our team of directors, deputy commanders and employees are focused on the future of the depot in supporting the Warfighters --- the reason we exist. Our new Front Line Leaders course graduated almost 200 supervisors and leaders. These leaders are provided the tools for the future to train high potential subordinates from the shop floor to the top floor. We are ensuring our employees understand best practices in training from all spectrums.

We are looking into the future by using key performance indicators that incentivize correct business behaviors. Through our efforts, we have reduced costs and internal quality defects, customer feedback is improving, and leaders are making better decisions. We are building a workforce that is ready to meet the demands for our customers. Our production numbers show we focus our efforts on the needs of our most important stakeholders: the Soldiers, Sailors, Airmen, and Marines.

We hope you find this report informative, honest, and thought provoking. Our team of over 5000 depot artisans and support staff are committed to the depot vision: To be the Warfighter's preferred best value solution for modification, repair, and overhaul of critical rotary wing and UAS components and platforms.

One Team! One Fight! One Future!

Christopher B. Carlile
Colonel, US Army
Commanding

The Depot

Activated March 10, 1961, Corpus Christi Army Depot was established as the U.S. Army Transportation Aeronautical Depot Maintenance Center (ARADMAC). The Army Transportation Corps recognized the need to establish an in-house capability to perform depot-level maintenance of Army aircraft. At that time, the Army had no facilities for the overhaul and repair of rotor wing aircraft. This work was being performed by contract or cross-service agreements.

Justification for an Army depot maintenance capability was based on three main points. The Army needed its own depot-level maintenance facility by which it could measure overall maintenance performance; a base with an experienced team that could expand rapidly in case of a national emergency; and a center for training critical Military Occupational Specialty (MOS) skill requirements.


The Secretary of Defense approved the concept and authorized the Army to establish an "in-house" aircraft maintenance capability to support mission essential equipment. The facility was to overhaul and repair the full range of aeronautical materials, including airframes, engines, components, accessories, and electronic equipment.

When the U.S. Army Transportation Aeronautical Depot Maintenance Center, or ARADMAC was activated in 1961, Army aviation finally had its own aircraft maintenance facility for the first time in its 20-year history. Before then, all complete overhaul and repair of Army aircraft was done at Navy and Air Force installations or through contracts with private industry.

The depot's first crash battle damaged aircraft was not a helicopter, it was an L-20 Beaver, a U.S. Army fixed-wing aircraft which had suffered extensive damage and required complete structural repair and overhaul. ARADMAC's first full production aircraft unit rolled off the assembly line in August 1961.

The depot would not specialize in rotary wing aircraft until the mid 1960s.

By the end of its first year of operation, ARADMAC's workforce totaled 1,249 civilians and 14 military. In one year's time, the depot had hired a workforce, set up shop, laid out a production plan and overhauled 28 Army aircraft and 153 engines.

In 1974, ARADMAC was officially redesignated as the Corpus Christi Army Depot. As part of the change, CCAD was to report directly to the U.S. Army Materiel Command (AMC) in Washington, D.C. instead of the U.S. Army Aviation Systems command in St. Louis, Missouri.

Project "Flat Top:" USNS Corpus Christi Bay

The Albemarle (AV-5) a reserve fleet seaplane tender was outfitted at Charleston, S.C. as a floating maintenance unit capable of providing fixed base repair facilities at critical overseas areas.

U.S. Army Materiel Command GO No. 67, October 6, 1964, activated the 1st TC Bn (Aircraft Maintenance Depot) (Seaborne) assigned to AMC and stationed at Corpus Christi Army Depot. CCAD was assigned responsibility to train and operationally support the unit and similar follow-on units as required, and provide worldwide mission support to the Floating Army Maintenance Facility.

The depot also provided administrative, logistical, and financial support to the project Flat-Top Field Office.

Providing major repairs and maintenance for Army helicopters and fixed wing aircraft wherever needed, USNS Corpus Christi Bay also served as a backup for overseas land-based facilities.

Need for the service stemmed from the excessive time to return aircraft components from isolated overseas locations to continental United States maintenance shops.

Known as Corpus Christi Army Depot, there was no sign of slowing down as the depot moved forward into new decades. During the 1980s, the Corpus Christi Army Depot welcomed a variety of new aircraft which CCAD artisans continue to work on today.

The depot officially received the CH-47 Chinook in 1983, components from the Apache AH-64 in 1985, and the UH-60 Black Hawk in 1986.

In July 1992, the Defense Logistics Agency was established and the supply mission of CCAD was transferred to Defense Distribution Depot-Corpus Christi, a part of Defense Logistics Agency.

In September 1993, CCAD began absorbing Navy SH-60 Seahawk and AH-1 Cobra Whisky work from Naval Air Rework Facility Pensacola, Florida. Seventy-five employees were hired from Pensacola to do maintenance work.

In September 2000, CCAD entered into the first public-private partnership with General Electric Aircraft Engines. This partnership has garnered success in process improvements particularly in the T-700 engine line. With the implementation of Lean Six Sigma, production turnaround time has been dramatically reduced on the T-700 engine line.

Cost of fixed (capital) government-owned assets assigned to the Corpus Christi Army Depot land, buildings and improvements, production equipment, and other capital was $746.6 million at the end of FY06.

Contributing to Aviation Readiness

Perform overhaul, repair, modification, retrofit, and modernization of airframes, aircraft components, systems, subsystems, and related aeronautical items for Department of Defense, other U.S. Government agencies, and foreign customers;

Perform repair of aircraft armament and fire control systems in conjunction with MRO of aircraft;

Provide the Army's only level-one bearing overhaul facility reworking aeronautical, wheeled vehicle, tank and Navy high-speed hovercraft bearings;

Manufacture and fabricate parts and assemblies as required to support MRO; to meet NICP requirements and provide fast reaction repair parts manufacturing through use of CNC machines;

Provide engineering services in support of overhaul, repair, modification, retrofit, and modernization of aircraft systems, subsystems, and components;

Perform avionics and electronics repair, calibration, and certification in support of the repair and overhaul programs.

CCAD Vision

The CCAD Vision was developed over several years and refined at a summer 2010 Senior Depot Leader Summit.

• To be the Warfighter's preferred best value solution for modification, repair, and overhaul of critical rotary wing and UAS components and platforms.

• To anticipate and prepare for future MRO requirements with tools, training, and facilities.

• To utilize LMP and other automation solutions to reduce indirect costs, focus on programs with highest benefit to the Soldier and make informed business decisions on off-loading programs that are not economical.

• To fully utilize the Aviation Enterprise (AMCOM, IMMC, RDEC, PEO-AV, USAACE, and CCAD) to provide coordinated, effective and efficient support to the Warfighter.

Since its inception, CCAD has grown to become the largest tenant organization on Naval Air Station Corpus Christi with more than 164 acres and 2.3 million square feet of industrial space.

With a workforce of more than 5000 and annual orders for more than $2.5 billion, CCAD is the largest employer and economic engine for the South Texas region.

Corpus Christi Army Depot maintains organic depot Maintenance Repair and Overhaul capabilities that are designed to retain, at a minimum, a ready, controlled source of technical competence and resources to meet military requirements. The depot contributes to aviation readiness through, overhaul, repair, modification, recapitalization, retrofit, testing and modernization of helicopters, engines and components for UH-60 Black Hawk, CH-47 Chinook, AH-64 Apache, OH-58 Kiowa, and the Air Force HH-60 Pave Hawk.

The depot's mission is to return Army rotary wing aircraft and components to the fight with uncompromising quality, at the lowest possible cost, in the shortest amount of time possible; to support the Army's accident investigation processes with subject matter expertise and reliable laboratory analysis anywhere in the world; when required, assess, evaluate, and repair forward deployed aircraft and components anywhere in the world, to include depot forward capabilities as required; and to support Active, Reserve and National Guard maintenance skill development with hands-on experience at the depot.

In conjunction with the primary mission as the Army's only depot maintenance facility dedicated solely to the overhaul of aeronautical equipment, Corpus Christi Army Depot has the facilities to perform chemical, metallurgical, spectrographic and metrological analysis and testing.

Overhaul of aircraft and components requires sophisticated equipment in order to achieve the exacting specifications established for aeronautical items.

For example, due to the exacting tolerances and balancing requirements, the jet engine requires expensive test facilities, such as the turbine engine test cells, to perform final test runs of the overhauled and/or repaired engines. Corpus Christi Army Depot has 11 turbine engine test cells which are used to perform such tests.

Center of Industrial and Technical Excellence

Corpus Christi Army Depot is the Army's Center of Industrial and Technical Excellence (CITE) for aviation structural airframes and blades, advanced composite technologies, flight controls and control surfaces, aviation engines, aviation transmissions and hydraulic systems (including sub-system accessory components), and aviation armament, electronics, support equipment (less avionics).

The depot has attained the following industrial certifications: ISO 9001-1994, Nov 2003 (Bearing Facility); ISO 9001:2000, Nov 2005; AS9100, Sept 2006; AS9110,Feb 2007; Shingo Prize Bronze Award, Aug 2007; Nadcap Certification, Aug 2008; ISO 14001, Nov 2009

CCAD-MRO Synchronization

These depot MRO capabilities work within the Army's two overarching missions; support for the ARFORGEN—synchronize Soldiers, equipment, resources and training to ensure a global presence in combat of terrorism—and posturing for the future which takes all elements of Army aviation working together.

CCAD's end-state is a modern, reliable, fiscally conservative, cost-effective and highly responsive enterprise that is flexible enough to meet Army requirements in both war and peacetime while retaining a continuous improvement mindset.

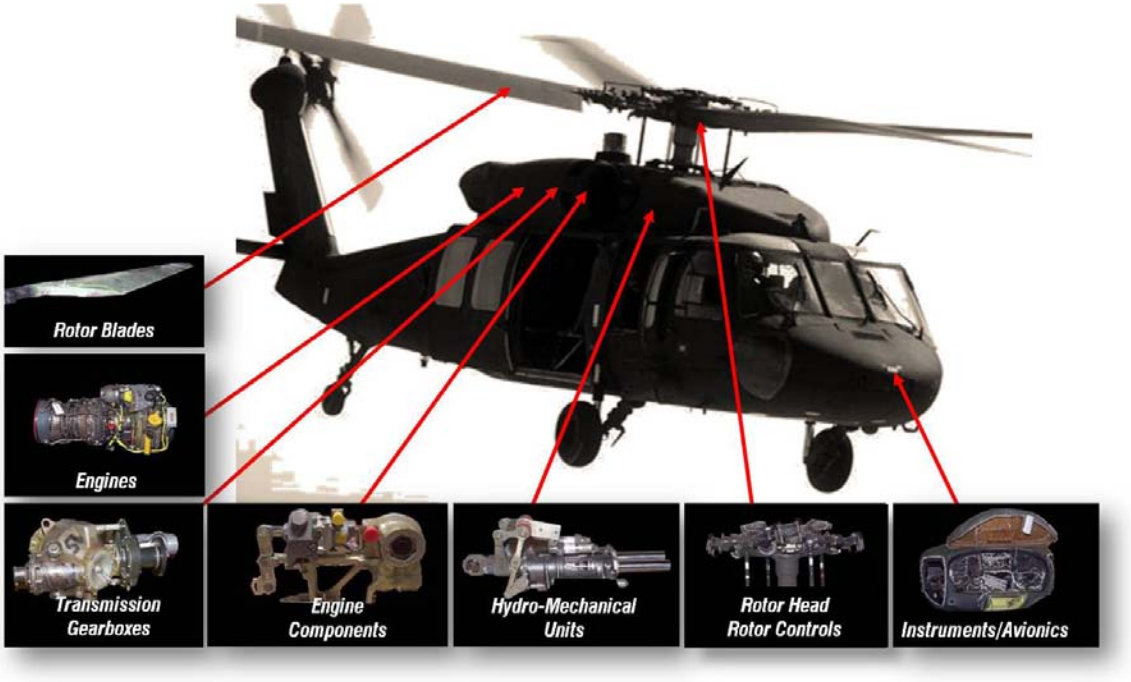
A Joint Service Depot

The joint service aircraft maintenance status helps ensure the depot's future, along with the Lean and Six Sigma initiatives implemented during the past eight years. These initiatives have reduced or avoided cost and improved production on the UH-60 Black Hawk recapitalization assembly line, as well as the HH-60 Pave Hawk production line. Additionally, the T700 and T-55 engine assembly lines have dramatically increased production. A new program includes the OH-58 Kiowa Warrior.

Power of Partnership

Partnerships with Original Equipment Manufacturers is part of ongoing efforts for continuous improvement. CCAD has successfully partnered with General Electric Aircraft Engines, Sikorsky Aircraft Corporation, the Boeing Company and Honeywell International. Through sharing ideas with these Original Equipment Manufacturers and the technical engineering logistics supply support they provide to depot artisans, CCAD has met and exceeded production schedules.

Workload



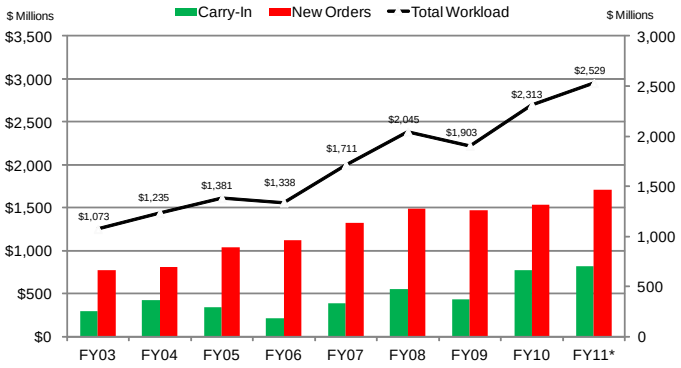
CCAD continues to deliver outstanding support and products to its customers. Over the past 8 years, CCAD accepted over $11.3 billion in aircraft and component orders. In FY03, total workload was $1.1 billion but grew to over $2.5 billion in FY11. While FY11 new orders increased 121% from FY03, total workload increased 136% over the same period resulting in increasing levels of carryover from year to year.

Overall from FY06 through FY11, CCAD incurred many challenges to proactively posture production operations to handle the increasing workload. Each year, unforecast demand and new orders prompted the depot to review processes to handle the increased workload.

Demand for components and recapitalization of the UH-60 fleet for the past two years, are primary drivers to carryover. Continuously evolving customer demands highlight the importance of timely forecasting of new orders and efficient production processes to maintain a stable production rate. With LMP, processes run more efficiently, resulting in reduced carryover in the coming years.

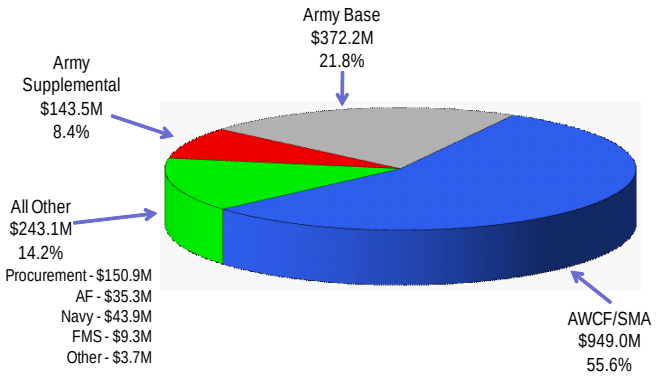
In FY11, CCAD accepted new orders totaling $1.7 billion across a wide customer base. Direct support includes $515.7 million or 30% for Army customers, $150.9 million or 9% for Army Procurement, and $949 million or 56% to

Depot Workload



Source: LMP as of EOM September 2011.

New Orders by Customer $1707.8M



Source: LMP as of EOM September 2011.

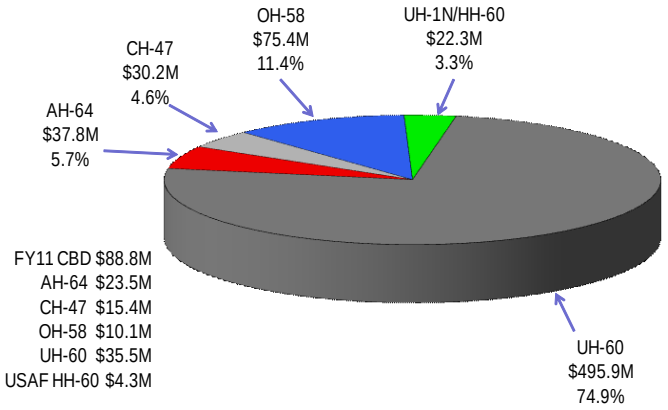
the Army Working Capital Fund (AWCF). While no less significant, workload supporting other services and Foreign Military Sales (FMS) consistently comprise about 5% of the new orders. The past couple of years, CCAD's workload consists of 40% airframe orders and 60% component orders.

The general composition of the workload allows CCAD to balance the requirements for long lead time parts and processes generally associated with airframe workload against the shorter turnaround times for parts, inventory, and revenue generation for component programs. In FY11 CCAD accepted new orders for airframes totaling $661.7 million including orders for crash battle damage repairs of $88.8 million.

The bulk of airframe orders support the workhorse of Army Aviation, the UH-60 Black Hawk, but the depot continues to see evolving requirements for the OH-58 Kiowa. For component orders, the distribution of new workload remains similar to airframes.

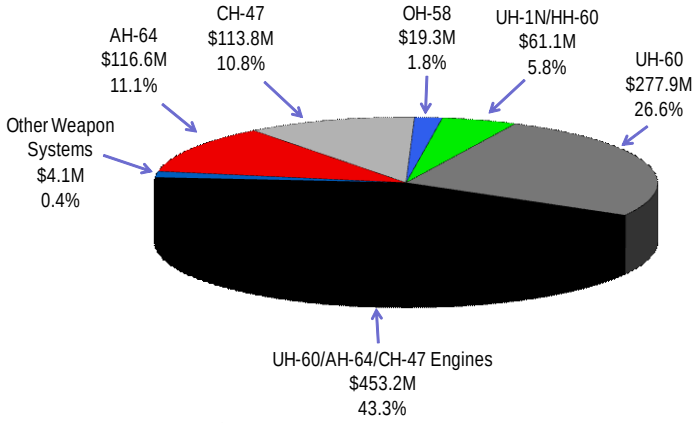
Engine workload tied to UH-60, AH-64, and CH-47 airframes comprises $453.2 million or 43% of total component workload with UH-60 components at $277.9 million or 27% of the total workload. Similar to airframes, our sister service and FMS component workload makes up about 6% of the total. The overall balance of the depot workload creates balance in production areas.

Airframes New Orders $661.7M



Source: LMP as of EOM September 2011.

Components New Orders $1046.1M



Source: LMP as of EOM September 2011.

Major Programs That Directly Support the Enterprise and Ultimately the Warfighter

UH-60A-L-L Black Hawk recapitalization: UH-60 'A' to 'L' modification increases the Black Hawks' mission lift, range and load capacity necessary to support our Warfighters at a time when air support is critical. Recap is part of the Army's effort to reduce platform sustainment costs and contain the expense of replacing aging helicopters with new ones. Each recapitalized unit saves taxpayers approximately $12 million. Overhauling and upgrading structural, engine, and airframe components allows Army Aviation to realize an asset that is equal to or better than a new one.

HH-60 Pave Hawk: The Structural Integrity Pave Hawk program for U.S. Air Force Special Operations Forces and Combat Search and Rescue is designed to prolong the life of the aircraft through a structural upgrade that either replaces or modifies parts on the airframe. This program is high priority due to the depot working on ten percent of the Air Force fleet at any given time. Pave Hawks are highly modified versions of the Black Hawk.

OH-58 Kiowa Warrior Overhaul: Due to its success, OH-58D KW and future variants are expected to operate through FY 2025, and considering its high optempo, CCAD, PEO Aviation and AMCOM realized the need for a cost-effective overhaul program. The KW Overhaul Program began when the depot inducted its first OH-58, Oct 5, 2010. This pilot program will set the stage and processes for follow-on overhaul OH-58 aircraft. The desired end-state for CCAD and AMCOM is to produce an aircraft every 180 days.

Crash Battle Damage: CCAD's crash battle damage repair program is an asset to Army Aviation. Between FY2003 and FY2010, CCAD saved $922 million by repairing crash battle damaged UH-60s, CH-47s, AH-64s and OH-58s. Instead of purchasing a new $17 million UH-60 Black Hawk, for instance, CCAD could repair it for $6.7 million. By returning helicopters to the fight for millions of dollars less than it would take to buy a new helicopter, the CCAD enterprise ensures a commitment to a cost-conscious culture.

Rotary Blade Repair Facility: Rotary Wing/Composites Division continues its support of the war effort by increasing the monthly production of UH-60 Main Rotor Blades from 70 to 100 blades, an increase of 43%. The division increased its monthly production schedule of UH-60 Tail Rotor Blades from70 to 85 in FY 2009 and 100 in FY 2010. The goal is to further increase the monthly production schedule to 100 UH-60 Tail Rotor Blades per month.

Engine and Transmission Repair: The engine and transmission test facility is the only facility to test AH-64D Apache transmissions along with UH-60A/L, CH-47D and OH-58 transmissions. It is the only facility capable of overhaul, repair and modification of all Army, Navy, Air Force and Marine rotor heads and rotor controls. Additionally, nearly 3,000 General Electric T701Ds and 400 Honeywell T-55-714 engines have been produced with a significant reduced turn-around-time since the workloads were assumed.

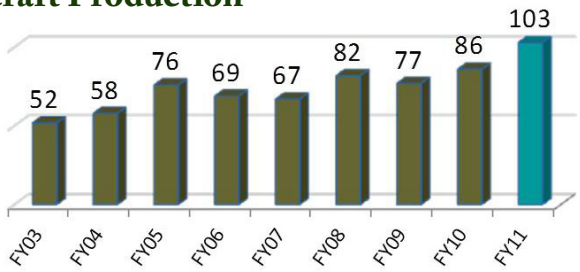
Component Repair: Eighty percent of the total revenue is component repair. Components Production plans, coordinates and executes hydraulic, mechanical, electrical, avionics, instruments, bearings, aircraft rotor systems, rotary wing, rotor heads, rotor controls, and related aircraft component production at CCAD to meet scheduled maintenance requirements of the DA, DoD, and other U.S. and foreign customers. Components programs continues in the implementation of Lean Six Sigma manufacturing and production methodologies and Continued Process Improvements, Value Stream Mapping (VSM), Rapid Improvement Events (RIEs), and Lean 6S Events. In 2009, events were conducted netting a total Lean Savings of $12,798,765.

Despite issues with timely workload forecasting, CCAD continues to build on its production efficiencies. In FY11, CCAD surpassed the previous year's airframe production by 20% to produce 103 airframes. The most significant achievement is the production/delivery of 48 UH-60 Recapitalization airframes during FY11; an achievement not anticipated for another 4 years. This milestone is critical to Army Aviation in reducing turnaround times for critical assets for contingency operations.

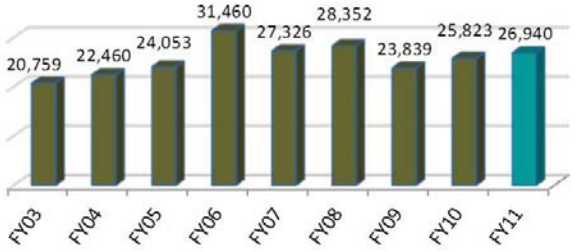
In addition to the UH-60, CCAD delivered 13 HH-60 Pavehawks to the US Air Force. Not to be out done by Aircraft Production, Aviation Systems achieved a few milestones as well. Main rotor blade production easily outpaced any previous year's performance while transmissions and gearboxes nearly eclipsed previous production amounts.

Although other production areas did not achieve similar results, CCAD achieved an 11% increase in monthly production rates in cold section modules and a 47% increase in power turbine modules. These milestones are a testament to the hard work of CCAD's team of employees, managers, and contractors. If one fails, the team fails much like the Soldiers CCAD supports.

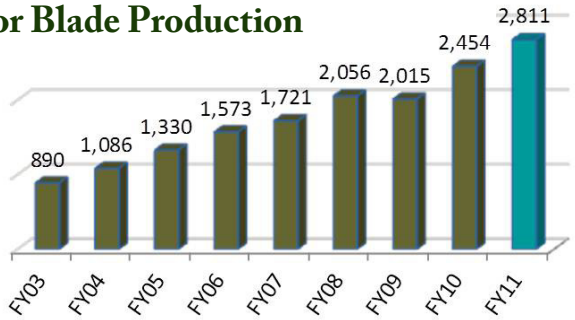
Aircraft Production



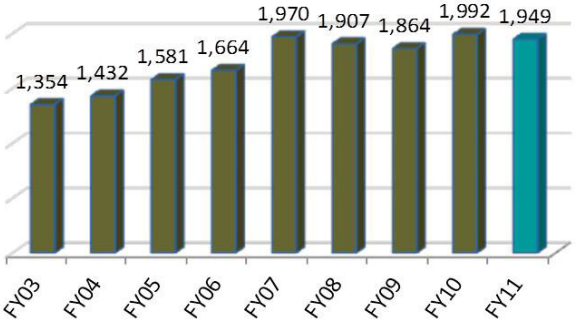
Component Production



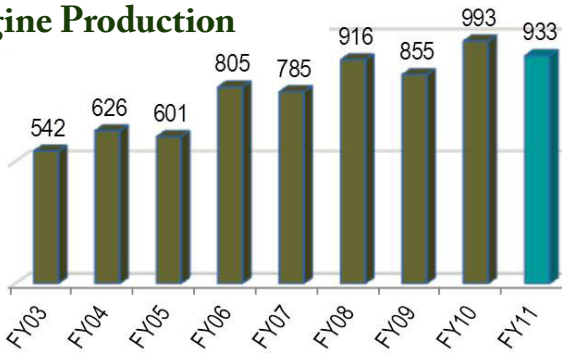
Rotor Blade Production



Transmission Production



Engine Production



Financials

CCAD's evolution as a critical DoD aviation supplier is manifested in its financial statements. Over the 8-year period, annual depot revenue grew an average of 13% per year to reach its highest level in FY11 of $1471.9 million. The most significant drop in revenue occurred in FY09 from the transformation to the new enterprise system, LMP.

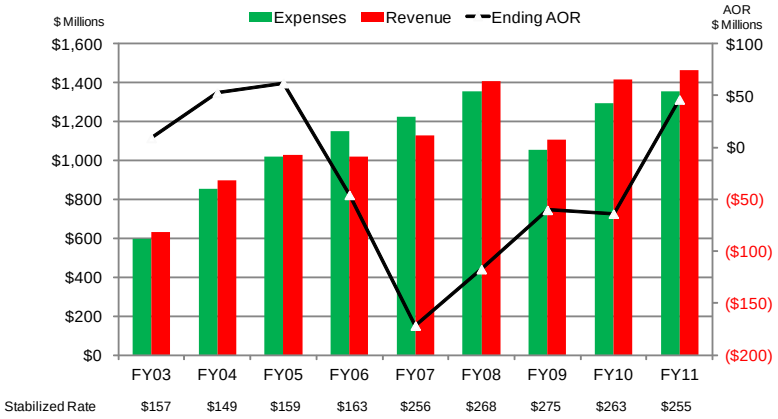
The financial impacts from the transformation included adjustments in revenue recognition from materials, negative revenue from material credits, and adjustments to material costs from fluctuations in moving average costs. Over time there has been improvement, but the depot is not fully mature in its LMP processes.

Comparable to revenue, depot expenses continue to grow. From FY03-FY11, depot expenses increased an average of 12% per year. Similar to revenue, there was a slight decrease in expenses in FY09 primarily associated with material costs. From FY08 – FY09, there was a 41% decrease in material expenses. Much of the material purchased prior to the implementation of LMP was aborbed and placed on projects at minimal value as incurred costs.

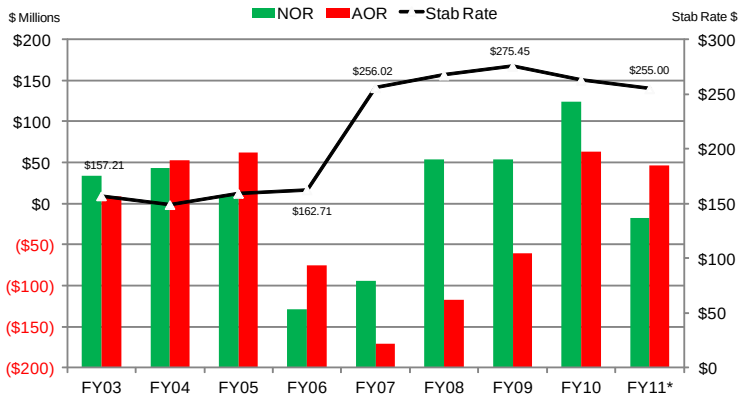
Despite the adjustments in FY09, the depot's Accumulated Operating Result (AOR) remains positive the last 4 years as the depot recovered costs from an AOR delta of $171.6 million in FY07. Increasing rates from FY06 to FY09 helped bring the AOR back above zero in FY10. The accumulation of positive AOR allowed the depot to decrease rates for customers in FY10 and FY11. In FY12, projections indicate a 31% decrease in stabilized rates for fixed price orders over FY10. The prognosis in subsequent years anticipates additional rate decreases as CCAD solidifies its cost-conscious culture and optimizes efficiencies with Lean Six Sigma and LMP.

To develop a standard baseline, the depot illustrates its revenue growth as a function of total production

Revenue/Expenses/AOR



Rate Management (NOR/AOR/Stabilized Rate)



* Denotes end of year projection.

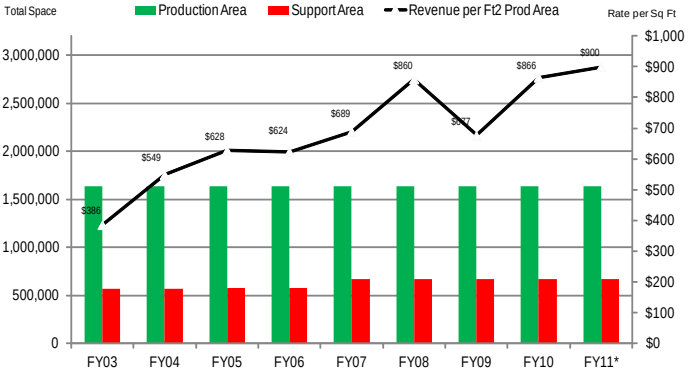
area, direct personnel strength, and direct labor hours. In FY03, indirect support area covered 565,000 square feet or 34% of the total depot square footage. By the end of FY11, indirect support area increased by 108,000 square feet to 41% of the total depot area. The total production area remained constant through the period at 1.7 million square feet.

With an increasing revenue stream through the 8-year period, CCAD revenue per square foot of production areas increased 233%. With the addition of the Dynamic Component Repair Facility, it will take some time to maximize the revenue as the depot establishes new production areas and reorganizes space in existing facilities.

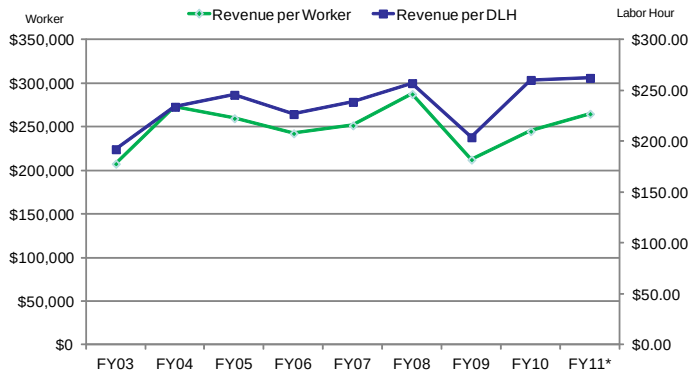
When examining the revenue growth as a factor of personnel or labor hours, there are very similar profiles and trends. Both profiles incur a significant dip in FY09 associated with the integration of LMP, and then begin a gradual increase. In FY03, revenue generation per worker was $207.7 thousand, but over the past 8 years there is a gradual increase to reach the current value of $257.1 thousand per worker. For direct labor hours, the depot earned $192 for every direct labor hour worked in FY03, but now earns $262 per direct labor hour. The positive revenue trends are not limited to these indicators, but other indicators associated with costs are also favorable

Another attribute of our cost-conscious culture is the contribution of indirect support towards revenue maximization. From FY03-08, the depot observed an overall positive trend of $3.73 in revenue for every $1 of indirect costs. With the implementation of LMP in FY09, the revenue decreased

Revenue Generation Per Area

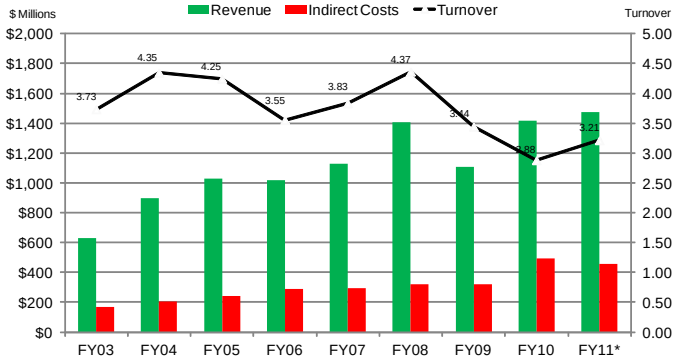


Revenue Generation

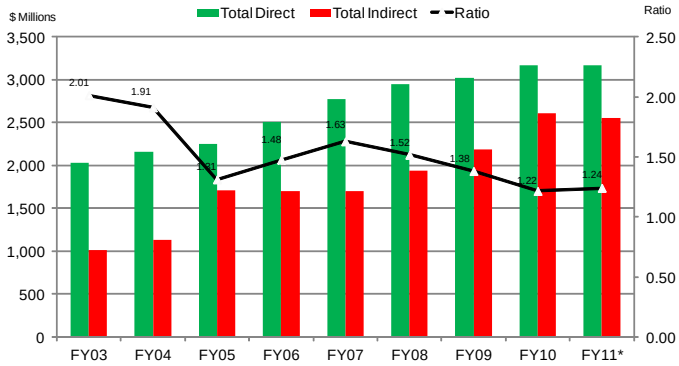


* Denotes end of year projection.

Overhead Turnover (Correlation of Indirect Cost)

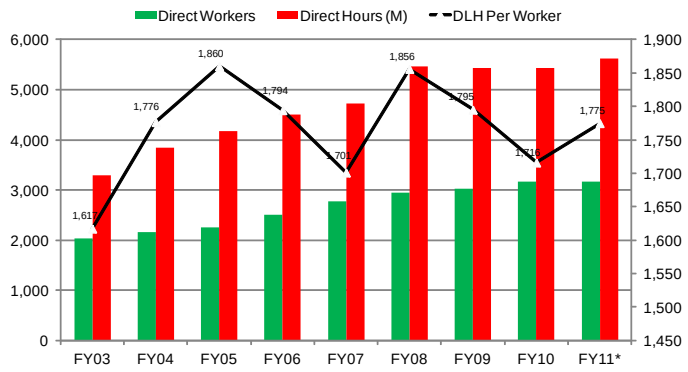


Direct/Indirect Strength

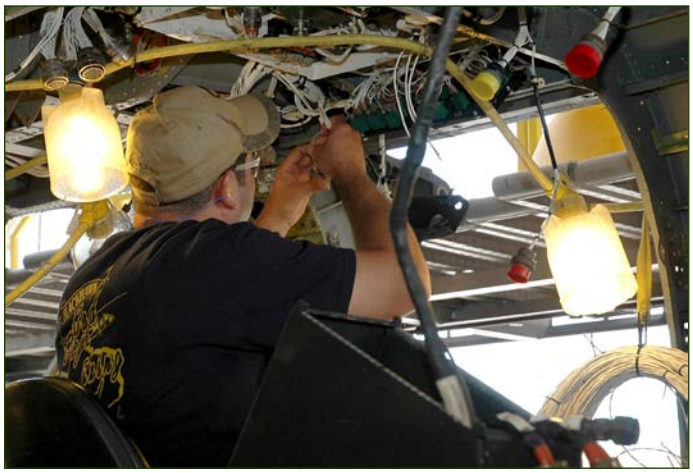


Direct/Indirect totals include contractors and civilians directly paid by CCAD.

Direct Labor Hours



Direct Workers include contractors and civilians directly paid by CCAD.
Direct Hours include regular, overtime, and contractor hours.



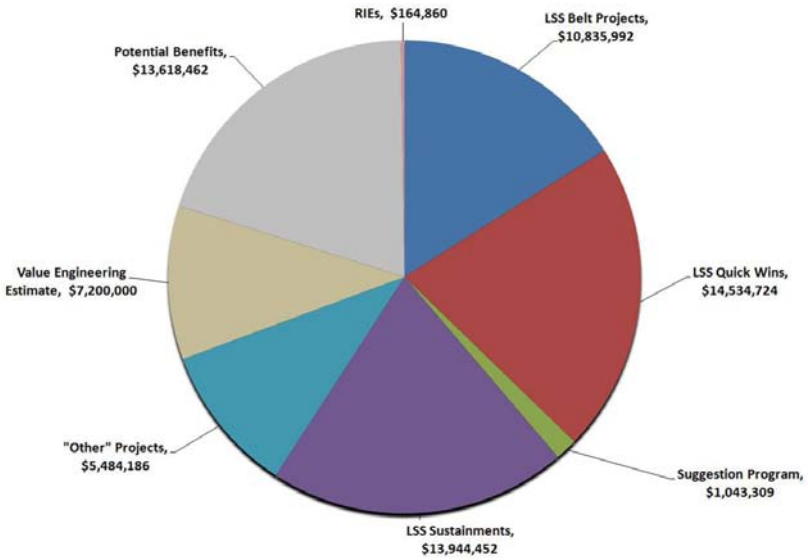
to $2.88 for every $1 in revenue through FY10. This is attributed to the balance in revenue loss (as described above) and an increase in indirect costs for LMP support. In FY11, CCAD turned the corner driving down costs reversing turnover rates to earn $3.21 for every $1 of indirect costs.

Employment conditions over the past 8 years have been favorable for the depot. From FY03-FY08, personnel strength grew an average of 10% per year and roughly 2% per year through FY11. In FY11, the CCAD workforce increased less than 1% over FY10 as a result of the reorganization balancing personnel with workload. One element to address in the coming years is the ratio of direct to indirect workers. From FY03-FY10, the direct workforce grew 6% per year while the indirect work force increased 13% driving ratios of 1.63 direct-to-indirect in FY07 to 1.22 in FY11. The ratio in FY11 was slightly better at 1.24 direct-to-indirect. The ability of the depot to balance the support tail for production operations will be paramount in the months and years ahead. This will prove difficult to manage given our current fiscal and economic climate.

As previously discussed, the CCAD direct workforce grew 10% per year through FY08 and another 2% per year through FY11. Despite the additional workers, the depot struggled to increase its direct labor productive output (direct regular, overtime, and contractor hours) for those workers. From FY03-FY08, production based on depot labor hours increased 11% per year, remained steady from FY08-FY10, and finally improved 3.4% in FY11. Much of the stagnant production growth is attributed to the vast amount of training and indirect processes supporting LMP beginning in FY08. The indirect hours take away the productive capacity of the depot, however the depot is in the early stages of a gradual increase in total direct labor hours.

Initiatives

2011: A Year to Remember



Continuous Improvement

During FY11, CCAD enjoyed the best "continuous improvement" year in recent memory. CCAD shattered the original goal of $42.8 million in financial benefits by executing 67 projects valued at almost $48 million in internal cost avoidances and savings to our customers.

Production operations accounted for about 74% ($35.5 million) while the support directorates accounted for the $6.8 million in financial benefits. Two factors positively impacted the continuous improvement culture this year are: the deployment of LSS Black Belts directly into the organization structure, and the establishment of a "Cost Collector" function to help track, validate, and communicate projects through the system. Both full-time roles helped create the focus necessary to begin a resurgence of improvement efforts across the new organization.

Almost a third (30%) of the waste eliminated from our processes came from Lean Six Sigma process improvements that document baseline performance metrics, initiate and implement an immediate advance to the process, and record a new improved average. The value of these projects can be vastly different ranging from $5,000 to more than $4 million.

Another opportunity area came from the sustainment of processes improved in previous years. A review and audit of a list of projects from FY10 proved CCAD sus¬tained process improvements. Twenty-nine-percent ($14 million) of CCAD's financial benefit total for the year derived from controlled process improvements in FY10. Formal project reviews also had a huge impact on overall savings for the depot accounting for over 23% ($11 million) of our total.

Validated Value Engineering (VE) projects initiated by the AMRDEC Aviation Engineering Directorate (AED), in conjunction with CCAD and AMCOM IMMC, exceeded the $1 billion mark in FY11. Because aviation parts are often composed of unusual materials and manufactured to precise tolerances, they are very expensive. AED has been capturing the savings associated with new repair processes for aviation parts using the Value Engineering methodology since 1990. CCAD is a key player in virtually all of the VE projects initiated by AED and is credited with over $200 million in savings. The joint efforts of AMRDEC, CCAD, and AMCOM over the past 20 years have saved the Army at least $1 billion for the overhaul of these aviation components.

Partnerships play a key role in the continuous improvement culture transition. CCAD partners, Sikorsky, General Electric and Boeing validated 28 projects for over $10.3 million in financial benefits.

Leading Change

Corpus Christi Army Depot has been heralded as a Coastal Bend industry staple since 1961. Today, CCAD is adapting business operations to carve a larger slice of the Army Aviation enterprise. For the first time in its 50-year history, the depot is in the midst of a major re-organization.

CCAD is on a mission to set the standard for effective and efficient government spending. The depot is adapting to smaller defense budgets cutting cost yet increasing production.

The restructuring aligns the depot with an enterprise resource model, replacing a silo organization with horizontal integration creating a networked, informative matrix that removes barriers to production, improvement or cost reduc-

tion and empowers employees with knowledge and collaboration. Two years ago the depot began using the Logistics Modernization Program, or LMP, to maximize efficiency. This provides the data across the matrix to streamline production. It encourages interaction across production and support networks by sharing performance data that discards roadblocks that hinder aviation maintenance and repair operations.

Taxpayers and soldiers will benefit the most with overall cost savings and improved performance--Warfighters get the aviation equipment they need when they need it, on time and below cost.

Since 2003, the depot saved the Army more than $20 billion, but by restructuring, CCAD can double that cost savings. Continuous improvement is rapidly becoming the culture, as each division adapts or reviews programs to increase efficiency, reduce cost and improve repair turn-around-time.

CCAD is focusing on modern weapon systems that directly contribute to the War on Terror. For example, the depot halted production on the legacy UH-1N "Huey" after the Air Force decided to move that aircraft recapitilization to Naval Air Station Cherry Point. Once a mainstay at CCAD, the Army retired Hueys sometime ago. Repairing only two UH-1Ns per year, the depot cut the program, realigned the floor space and now can repair 12 more Black Hawks a year for the Army, generating more than an additional $80 million annually for the depot.

As the largest employer in the region, CCAD's local economic impact is close to $2.175 billion as determined by Texas A&M University- Corpus Christi.

Education- A Means To an End

One way the depot is taking on this challenge is by investing in education.

Today CCAD is looking for employees with both knowledge and education, but the depot isn't looking to the outside to find the perfect employee. Employees are being provided with the opportunity to expand their education through local college classes, Army programs, tuition assistance, and enrollment in leadership courses like the innovative Front Line Leaders Course.

The Leadership courses are aimed at providing leaders the tools necessary to manage employees. The course incorporates interactive learning, role-playing, and role-reversal.

The depot is investing in people's knowledge, which will ultimately lead to a more capable, streamlined workforce, leading to more savings for the taxpayer and quicker service to the soldier.

Investment

Sustainability for the Future

Integral Partnerships

Technical, Engineering and Logistical Services and Supplies (TELSS) Contracts with:

The Boeing Company–awarded in 2010 Total estimated value of the contract is $714 million. Supports the CH-47 Aircraft /100 Components and AH-64 Aircraft / 30 Components with over 7500 repair parts and Technical, Engineering, and Logistical Services.

General Electric--awarded in 2005. Total estimated value of the contract is $1.342 billion. Supports the T700 Family of Engines, Modules, and Components with nearly 1000 repair parts and Technical, Engineering, and Logistical Services.

Honeywell –awarded in 2005. Total estimated value of the contract is $116 million. Supports the T55-714A Engine and Components with over 1300 repair parts and Technical, Engineering, and Logistical Services.

Sikorsky Aircraft Corp--awarded in 2008. Total estimated value of the contract is $859 million. Supports H-60 Aircraft and 70 Components with over 7200 repair parts and Technical, Engineering, and Logistical Services.

Fluid Cell Press

The FCP reduces time and cost for creating structural components for UH-60, CH-47, AH-64, and OH-58 aircraft. Artisans save thousands of dollars with little or no lead time.

Ex: Frame section 265 for XH-60; OEM cost $170,000 with 180-day lead time, FCP produces it for $111 in one hour.

The innovative press, one of four in the eastern hemisphere, can make parts in minutes as opposed to days on older equipment.

Capital Investment Program

A mandatory reinvestment program for infrastructure, CCAD procures replacement equipment, productivity enhancing equipment, information technology systems/equipment, and minor construction initiatives.

Total investment for the past three years:
FY09 - $6.996 million
FY10 - $90 million
FY11 - $42.7 million

These investments increase capacity and reliability, and production. The Warfighter gets that engine, transmission or rotor blade quicker.

Military Construction Projects (MCA)

Infrastructure updates include the Dynamic Component Rebuild Facility (DCRF), a state-of-the-art work environment, LEED certified and can withstand a CAT 5 Hurricane.

Technological innovations include the Smart Transmission Test System (STTS).

The STTS can test multiple products on each stand to maximize production capacity and equipment flexibility while saving space and money.

Phase One is 138,000 sq. ft. at a cost of $35 million. It will contain more than $90 million of new equipment, including the STTS.

State-of-the-art facility will increase the capacity, quality and reduced turnaround time of components going directly to the Warfighter.

Cost-Conscious Programs

CCAD's Crash Battle Damage repair program is an invaluable asset to Army aviation. Between FY2003 and FY2010, CCAD saved $922 million by repairing crash battle damaged UH-60s, CH-47s, AH-64s and OH-58D KWs. Instead of purchasing a new $17 million UH-60 Black Hawk, for instance, CCAD could repair it for $6.7 million. By returning helicopters to the fight for millions of dollars less than it would take to buy a new helicopter, the CCAD enterprise ensures a commitment to a cost-conscious culture and driving down the overall cost to the aviation enterprise.

UH-60 'A' to 'L' modification increases the Black Hawks' mission lift, range and load capacity necessary to support our Warfighters at a time when air support is critical. CCAD's recapitalization is part of the Army's effort to reduce platform sustainment costs and contain the expense of replacing aging helicopters with new ones. Each recapitalized unit saves taxpayers approximately $12 million.

The depot sent its first OH-58D Kiowa Warrior back to the fight during a roll-out ceremony held in the depot's Hangar 44, Oct. 14, 2010. The unprecedented OH-58D crash battle damage repair is the first step to increasing the number of Kiowa Warriors at a time when cost-effective measures are critical to support the war effort. Used extensively in Afghanistan, the OH-58D Kiowa Warriors are in short supply. The Army, with 330 of 368 helicopters on-hand and losing approximately 5 per year since 2001, wants Kiowa Warriors as an integral piece of the Combat Aviation Brigade for several more years.

CCAD earned Voluntary Protection Program Star Status, July 2010, for excellence in employee safety and health following an on-site visit and evaluation by the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA). The achievement culminates a five-year effort of CCAD coordination with OSHA to instill a safety-first culture within the workforce to ensure a safe working environment. The depot decided to improve its occupational safety and health programs after being listed on the Department of Defense's Federal Employees' Compensation Act Top 40 list in 2005--an indicator for lost time incidents and days off due to injuries. As only the third Army Materiel Command organization to receive the designation, CCAD joins Tobyhanna Army Depot and Crane Army Ammunition Activity.

The Vision

Depot 2015

These MRO capabilities work within the Army's two overarching missions:

- Support for the Army Force Generation by synchronizing Soldiers, equipment, resources and training to ensure a global presence in combat of terrorism.
- Posturing for the future which takes all elements of Army Aviation working together.

CCAD's vision is a modern, reliable, fiscally conservative, cost-effective and highly responsive enterprise that is flexible enough to meet Army requirements in both war and peacetime while retaining a continuous improvement mindset.

Initiatives to reach that vision include:

- Fully integrate ERP tools and modernization technology that provide detailed financial data to make informed business decisions that reduce costs
- Leveraging existing capabilities to provide the lowest operating costs for Army Aviation
- Ensure that reinvestment of profit in capital improvements is vetted by the Aviation Enterprise
- Grow the workforce as programs increase
- Foster an effective and efficient organization that is horizontally and vertically integrated, focused on the balance of cost, quality and schedule
- Cultivate a world class organization with a cost-conscious culture whose continuous improvement efforts are not solely Lean Six Sigma driven.
- Conduct business case analysis examining all costs to make financial business decisions that best support the Army
- Invest in the education of employees in order to limit outsourcing of intellectual products
- Focus on programs that provide the most savings to reduce operating costs for Army Aviation
- Promote a safety-conscious culture that encompasses work safety with physical, mental and spiritual wellness

Leadership

Biographies

COL Christopher B. Carlile
Commander, Corpus Christi Army Depot

COL Christopher B. Carlile was commissioned in 1989 as a Second Lieutenant from Arkansas State University with a BS in Zoology. He holds an MBA from Embry-Riddle and a MS in Strategic Studies from the Air War College. He is a certified maintenance examiner rated in the UH-1, OH-58, UH-60 and CH-47 with over 600 hours of maintenance test flight time.

COL Carlile's military education includes the U.S. Air War College, Command and Staff Course, Nuclear Planning and Execution Course, U.S. Army Space Operations School, Logistics Executive Development Course, Combined Arms Services Staff School and the Infantry Officer Advanced Course. He is a qualified Space Operations Officer and served as a Nuclear Strike Advisor for President George W. Bush. He is a Distinguished Honor Graduate of the Aeroscout Aviation Course.

COL Carlile's first assignment was to VII Corps in Germany in 1990. While there he deployed serving as the Supply Support Activity and Maintenance Platoon Leader during Operations Desert Shield and Desert Storm and the Aviation Intermediate Maintenance (AVIM) Production Control Officer during Operation Provide Comfort in Turkey and Northern Iraq. While assigned to the 10th Mountain Division, he deployed to Somalia where he served as Production Control Officer and Aeroscout Pilot during Operation Restore Hope. COL Carlile served as the Attack Helicopter Training Battalion Executive Officer (XO) and Operations Officer (S3) supporting six reserve attack helicopter battalions. He later served as the 4th Cavalry Regimental Operations Officer (S3) at Fort Knox, Kentucky. COL Carlile commanded A/8-101 (AVIM) at Fort Campbell, Kentucky deploying to Kosovo KFOR-3A and Afghanistan. He served as the 8-101st Aviation Regiment (AVIM) Executive Officer (XO) in Iraq during Operation Iraqi Freedom.

COL Carlile's most recent assignments include, Battalion Command of the 1-223d Aviation Regiment, Fort Rucker, Alabama and later as the Deputy Chief of Staff for the Aviation Center and Fort Rucker. COL Carlile most recently was the Director of the Unmanned Aerial Systems (UAS) Center of Excellence and assumed Command of Corpus Christi Army Depot June 2010.

William L. Braddy
Deputy to the Commander for Production

Mr. William "Bill" L. Braddy is the Deputy to the Commander for Production. He joined us from the Systems Engineering Group (SEG) of QinetiQ_North America (formerly Westar Aerospace and Defense Group) where he served as the Senior Vice President for Business Performance located in Huntsville, AL. His responsibilities included business integration, quality management, strategic planning, program finance, and facilities management. His company earned both ISO 9001-2008 and the Capabilities Maturity Model Integrated (CMMI) Level 3 certifications while Bill was with them.

Prior to Westar, Bill was the Director of Operations for the Recall Corporation headquartered in Atlanta, GA. His responsibilities included 51 facilities and 500 folks across the United States and Canada. Prior to that, he served as Vice President for Engineering and Product Development with Schneider National in Green Bay, WI. His team specialized in transportation network optimization and data warehouse development. Schneider uses the ten+ terabyte data warehouse for operations, data mining, and business performance management.

Bill completed a 26-year Army career in 1998. His experience includes armor and aviation command from company through brigade. He served as the Division Chief of Staff and Aviation Brigade Commander in the 101st Airborne Division, and on the Joint Staff in the Pentagon. He also served as the Deputy Director, J-7, Joint Forces Readiness Command, in Suffolk, VA. Bill is a graduate of the Industrial College of the Armed Forces in Washington D.C.

Kresten Cook
Deputy to the Commander for Support

Kresten Cook began his career at CCAD in 1983 as an Industrial Engineer and is currently the Deputy to the Commander for Support. He held the position of Deputy to the Commander for Production.

During his 28 years at the depot, Cook advanced through several engineering, business development and production leadership positions. Cook's experience at CCAD includes initiating the Business Development Office where he established the initial wave of partnerships between CCAD and Original Equipment Manufacturers and the depot's world-wide operations. He also led CCAD's Production Control and Programs Divisions, and was CCAD's Deputy to the Commander, acting, in 2003.

He has served as Senior Engineer and Chief of the Logistics Management Division supporting both the Directorate of Maintenance and Directorate of Engineering Services and was selected as the first Chief of the CCAD Corporate Performance Office.

Cook possesses a degree in Industrial Engineering from the University of Houston, an MBA from Texas A&M University-Corpus Christi, and is a 2010 graduate of the United States Army War College with a Masters Degree in Strategic Studies.

Annette Cross
Director, S1: Human Capital Management
A native Texan, Annette began her federal service at Corpus Christi Army Depot (CCAD) in 1987. From an entry level clerk typist, Annette has progressed to her current position as the Adjutant, S-1, Human Capital Management. Her career track includes assignment as a key player in the House Armed Services Subcommittee Hearing held at CCAD in 2001, as a member of the Army Materiel Command, Aviation Missile Command, and Corpus Christi Army Depot Joint Task Force and the Depot's Strategic Planning Working Group.

Eric Wilke
Director, S2: Security (A)
Eric has served in Panama, England, Germany, Turkey, and Saudi Arabia and has performed in multiple capacities, including Flight Chief, NCOIC Armory, Nuclear Convoy Security Response Team Leader, and NCOIC Information Security. Eric served as the Industrial Security Specialist for Davis-Monthan AFB, Tucson Arizona, before accepting the position of Operations Security (OPSEC) Officer, responsible for development and oversight of a fully functional OPSEC program charged with the protection of critical information.

Marc Gonzalez
Director, S4: Infrastructure Operations
Marc A. Gonzalez is the Director of Infrastructure Operations assigned to the Corpus Christi Army Depot. He leads over 500 engineering, environmental, and maintenance personnel to maintain and support the depot's industrial equipment, facilities, and environmental requirements. In 1996 he graduated from the University of Texas in San Antonio and received his active duty commission in the United States Air Force. He commanded several aircraft maintenance units. Marc is a Major in the Air Force Reserves.

Connie Salas
Director, S6: Information Technology Operations
Connie began her career with the Department of Defense at the Rock Island Arsenal in the Defense Ammunition Directorate after receiving her degree in Business Computer Programming. She arrived at Corpus Christi Army Depot in 1989 and has served in several capacities within the Information Technology organization. In May 2011, Connie was selected as the Director S6, Information Technology Operations where she leads program initiatives, the development of leading edge solutions, and sustains critical mission support systems.

Marcie Bischak
Director, S8: Resource Management
Originally from San Antonio, TX, Marcie entered civil service in 1980 working for the Air Force Commissary Service, holding numerous positions within the Southwest Regional office. She worked with Defense Commissary Agency San Antonio until 2002 when she was asked to serve as the DeCA European Budget Officer. Marcie held the position of Resource Business Area Director managing both Human and Financial Resources for over 10,000 employees. Knowledgeable in all aspects of financial management and audit, Marcie supports the command in providing relevant financial information and guidance .

Cynthia A. Mizes,
Chief, Civilian Personnel Advisory Center
A native of Corpus Christi, TX, Cynthia has served in the U.S. Department of Army for 25 years. She began her civil service career at U.S. Army Headquarters, 1st Infantry Division, Fort Riley, Kansas, as a Department of Army career intern specializing in Civilian Human Resources. Cynthia also served tours at U.S. Army Headquarters, U.S. Army Training and Doctrine Command, Ft. Monroe, VA; U.S. Army Headquarters, U.S. Army Combined Arms Support Command, Ft Lee, VA and as CPAC Director at from 2001 to 2008 at Fort Riley, KS.

David R. Askew
Chief, Safety and Occupational Health
Born and raised in Plymouth, NC, David joined the U.S. Air Force and served over 20 years in fire protection. After retiring, David continued his career in emergency services with local government as an Emergency Services Director for Warren County, NC. He managed the Emergency Management, Emergency Medical Service, Safety Program and Fire Marshal Office for three municipalities. He began his service at the depot as a Safety Specialist with the primarily responsibility to the Directorate of Aircraft Production and the depot's safety training program.

Roy Hollins
Director, Aircraft Production
As a retired Chief Warrant Officer, Army Aviator and Ranger, Senior Instructor Pilot, Maintenance Test Pilot Instructor, and Instrument Flight Examiner, Roy brings a wealth of experience to the production floor as he currently leads a direct labor capacity of more than 2.5M man-hours across 50 cost centers with annual operations exceeding $26M, to safely produce a quality product on schedule in support of the War Fighter.

Moheb Asaad
Director of Manufacturing & Process Production
Mo's career track has included numerous progressive assignments. In March 2000, he became the Chief of Depot's Business Development division. He has served as the Director of Manufacturing & Process Production since June 2003. Throughout his career he has led the modernization planning and execution efforts of depot's equipment, facilities, and processes, Manufacturing Technology program, the planning and establishing of depot's organic capabilities and served as project engineer and manager for many programs.

Judith A. Stephens
Director, Directorate of Power Train Production
Judith began her career as a Supply Specialist serving in the United States Air Force from 1976 to 1980. Judith transitioned to civilian service in March of 1985 working for the Sacramento Army Depot as an Industrial Engineer Technician. Thorugh a series of wise career moves and education, Judith was assigned as the Deputy Director for the Business Office located in the 309 Maintenance Wing. Today, she is the Director of Power Train at the Corpus Christi Army Depot.

Joe Mitchell
Director of Accessories and Rotor Blades
Joe's a Project Management Professional with over 27 years of combined military and civilian experience with a Master of Science in Project Management. Born in Friona, TX, he began his military career after graduating in 1985. He served over twenty years in the US Army with numerous assignments to include Aviation Maintenance Manager, Maintenance Examiner, Production Control Officer, Quality Control Officer, Tech Supply Officer and multiple combat tours with over 2500 flight hours, 700 combat hours, and 500 test flight hours.

Frank Morgan
Director of Quality Assurance
Born and raised in central Pennsylvania, Frank began his military career with the US Army in April of 1968 as a Cryptographic Equipment Repairer. He served 15 months in Viet Nam and left the service in 1970. In November 1983, he moved to Corpus Christi Army Depot where he joined the Quality Assurance Directorate and served in various quality management positions. In July 2011, he was promoted to Director of Quality Assurance. During his years in Quality he has been instrumental in developing and implementing many quality initiatives and programs.

Robert B. Sharp
Director, Production Management
Robert "Bob" Sharp joins Corpus Christi Army Depot from Hitachi Medical Systems America. There he served as Southwest Area Manager operating out of Fort Worth, Texas. He oversaw all field operations across a 500,000 square mile area and coordinated service, logistics, sales, facility management and training. Previously, he held the position of Research Fellow at Old Dominion University, Norfolk, Virginia where he was a contributing author to a text book on economic development and served as a resource for state and local policy makers.

Jim Kaylor
Executive Director, Aviation Systems Production
Jim started his career at Corpus Christi Army Depot (CCAD) in 1982. His first job was in the Directorate of Maintenance, Aircraft Production Branch as an Aircraft Electrician in Flight Test. In 1986 Jim accepted the assignment as Chief over the Special Operation Section working on Special Operations Forces aircraft (160th SOAR). Presently, Jim directs the production of the aircraft secondary items at CCAD. Areas of responsibility include the Directorate of Engines, Power Train, Accessories and Rotor Blades and Manufacturing and Process Production.

ar·ti·san (ähr-tuh-zuh n) *noun;* a person skilled in an applied art, a craftsperson, *see* CCAD employee

ccad artisans at work...

We're Here Because They're There

Corpus Christi Army Depot

One Team, One Fight, One Future