



An ATAC Client Success Story



AUBURN

TECHNICAL ASSISTANCE CENTER

COLLEGE OF BUSINESS

Sikorsky is a pioneer in the aviation field of vertical flight, and its commercial and military helicopters are found in service worldwide. Two models among the firm's Seahawk family – the maritime version of Sikorsky's military Blackhawk helicopter – are built at the company's Troy, Ala. manufacturing plant. Auburn Technical Assistance Center is working with Sikorsky's Troy plant to implement lean manufacturing techniques that are proving to produce significant efficiency improvements and cost benefits as the company ramps up production to meet heavy customer demands.



## Lean helping firm manage growth, meet demands

**Editor's Note:** Two models among Sikorsky's Seahawk family – the maritime version of its military Blackhawk helicopter – are built at the company's Troy, Ala. manufacturing plant. The MH-60R, provides powerful new capabilities to the U.S. Naval and Coast Guard fleets with digital cockpits and mission-adaptive systems. The Troy plant also produces the S-70B Seahawk Anti-Submarine Warfare/Anti-Surface Warfare helicopter for its international customers.



It has been a challenge growing from 180 employees to some 670 in an 18-month period, but for Sikorsky Aircraft Corp. in Troy, Ala., implementing lean during this growth surge has helped it to manage the expansion more effectively while significantly shortening the efficiency curve to meet increased customer demands.

"We are seeing production lead and cycle times being reduced on our assembly lines in almost daily increments," said Sikorsky Production Control Manager Eric Scott. "Along with lead and cycle time improvements, we are reducing waste and creating more efficient product flow through the manufacturing processes."

Facing an increase in both U.S. and international product orders, Sikorsky enlisted lean implementation assistance from the Auburn Technical Assistance Center (ATAC) in early 2007.

"We knew that we were going to have to make some rapid and drastic changes in our production operation over the coming months," Scott said. "And we knew that we needed outside assistance to do that most successfully."

That same year, ATAC delivered a sequence of in-depth lean training events and began facilitation of process improvement programs – kaizen events – in various production areas. That assistance is ongoing, but over the past year and one-half, Sikorsky has noted significant

improvements and cost savings that continue to multiply.

"In 2007, we produced eight completed helicopter airframes," Scott noted. "However, through

our kaizen events and lean implementation activities, we anticipate that we will deliver 36 by the end of 2008."

ATAC has to date, facilitated kaizen events in the five production areas of the Lower Nose Assembly Unit; Tail Cone Assembly Unit; Upper Aft Assembly Unit; the Join Area; and conducted a Value Stream Mapping event of the Warehouse for future improvement.

"We have decreased production lead time by days and have reduced production hours by hundreds – and in some areas – more than a thousand hours," Scott said. "We are seeing our trend lines drop where

## Kaizen Summary

### Event - Lower Nose, Kaizen #1:

Charter – To improve assembly lead time to 14 days (from 22.5).  
Reduce cycle time from 11 to seven days

**Key Tasks:**

- Implement 5s
- POUS & Supermarket Inventory Tools
- Improve work flow/layout
- Improve space usage

**Key Successes To Date:**

- Reduced lead time by more than four days
- Reduced cycle time to six days, exceeding original charter by a full day

### Event – Tail Cone, Kaizen #2:

Charter – To improve tail cone assembly lead time to 28 days  
(from average 40 days)

**Key Tasks:**

- Conduct problem root cause analysis
- Error proof process
- Implement more thorough process monitoring
- Improve key areas of tooling, materials, paperwork, personnel usage

**Key Successes To Date:**

- Reduced lead time to 30 days, exceeding original charter by two days

### Event – Upper Aft Transition, Kaizen #3:

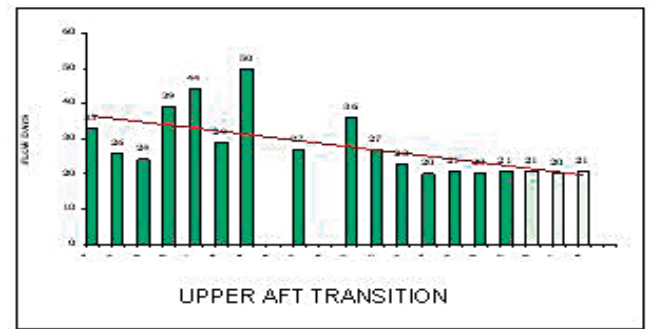
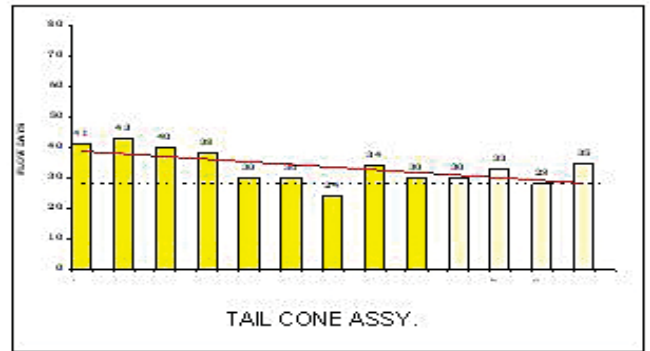
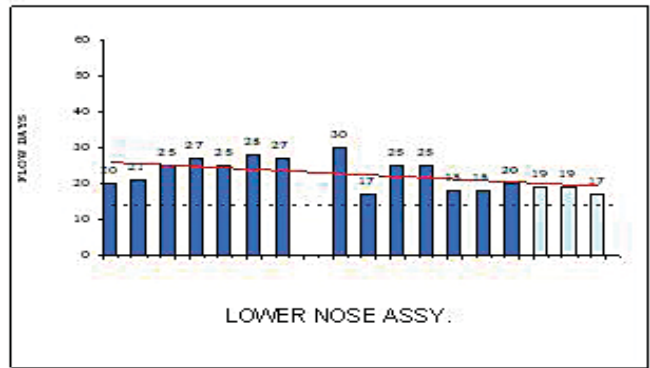
Charter – Reduce cycle time from one unit every 11 days to one unit every seven days

**Key Tasks:**

- Conduct problem root cause analysis
- Develop job/process tasks list
- Achieve balanced work on the line

**Key Successes To Date:**

- Reduced cycle time to six days, exceeding original charter by a full day



they need to be dropping. All of this can be attributed to the improvements that we are making to our processes through the implementation of lean and training our people.”

Scott says that Sikorsky’s partnership with ATAC is a big factor in enabling the firm to successfully manage this period of fast growth and high production demand.

*“Every unit that ATAC has worked with us on has shown dramatic improvement,” Scott said. “This is a momentum that we want to continue.”*

Scott says that Sikorsky is still collecting data from the original three kaizen events as well as the most recent events conducted in the Warehouse

and Join Area where the cabin and tail sections of the helicopter are joined together to form the complete airframe.

“As this trend continues, we are looking at achieving some efficiency

improvements that will translate into thousands of hours in saved production time and rework, which translates into hundreds of thousands of dollars, or even millions, over a given production year,” Scott said.

*Auburn Technical Assistance Center was established in 1976 and is an affiliate of the Alabama Technology Network and an Economic Development Administration University Center. As an Outreach arm of the Auburn University College of Business, ATAC provides business and technical assistance, customized training, and consultation in implementing value-added strategies to manufacturers and other businesses, not-for-profit organizations and government agencies in Alabama and the Southeast. SOAR is an ATAC publication. Direct inquiries and questions to Mitch Emmons, Sr. Outreach Assoc., 334.844.3881, emmonmb@auburn.edu.*

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