John Tomblin became boss of the National Institute for Aviation Research eight years ago when he was only 33. He's the man who has saved Wichita aviation companies millions of dollars in testing and travel money by developing new labs here, according to Cessna Aircraft's top engineer.

He helped create the idea and the beginnings of a medical composite materials industry.

He grew NIAR's operating budget from $18.2 million when he took over in 2003 to $39 million now.

NIAR — one of aviation's premier testing and research labs — is a virtual popcorn factory of ideas about how to create new things or test the brilliant — but possibly flawed — ideas of others.

Tomblin's people created a virtual reality lab to do 3-D interactive airplane design work. His staff, which includes 24 people with doctorates, speculates on and tests components and parts for every imaginable flying machine — commercial and general aviation aircraft, predator drones fighting war by remote control in Afghanistan.

NIAR has become one of the aerospace industry's more important guiding stars as the industry converts to composite materials and develops fantastic new tools, including many of the top-secret electronics and electronics-shielding products that Tomblin's engineers are testing for the military at NIAR.

Like a newly formed planet, it is increasing its gravitational pull, creating yet more satellites, more labs, more contracts, more employees, more reputation.

But the biggest thing, according to Tom Freeman, one of NASA's...
NIAR
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Top aerospace technologists, is that Tomlin has saved the aviation industry hundreds of millions of dollars in research and development costs in recent years. That’s a tall claim, but Freeman, who has worked extensively with Tomlin on composite materials projects, says it’s true, and that NIAR and Wichita are two of Tomlin’s brainchildren.

Tomlin did it, Freeman said, by doing something that looked impossible at first. He persuaded aviation companies that would never have spent millions of dollars doing secret research to share it with each other.

“His idea was getting people to agree that I wish he’d run for office someday,” Freeman said.

As a result, Freeman said, Tomlin has become the most influential leader in aviation.

“He’s got a way with people,” Freeman said.

But Tomlin himself says this is what he’s been doing all his life, after he acquired it only after being severely humiliated by a number of aviation people in Wichita, including line workers and engineers from the factories.

The key to the understanding of the success of NIAR, Tomlin said, can be found in an article about one day in 1994 when he was a new member of the aviation engineering community in Wichita.

University of Kansas

One of his students, an older man who obviously had worked in Wichita’s aviation factories, suggested to the young and cocky Tomlin, Ph.D., tell the alums what they didn’t know.

Then the student raised his hand.

Nice words from later, Tomlin was never quite the same.

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Before we finish that story, here’s what aviation people say Tomlin has done for aviation and Wichita.

Everybody in aviation could see that the composite materials development was coming along decades ago, that they would revolutionize aircraft skin and parts, Freeman said.

But everybody worldwide was surprised to keep their recipes and ideas and research on composite materials secret.

Tomlin must have known the research on the many variables of composites and other materials for aircraft in Wichita, millions of dollars of research, had become secret because being secret was understandable.

What meant was that everybody was spending millions of dollars apiece reinventing the wheel that had already been invented elsewhere.

This happened even further back in time, Freeman said, when aviation began using aluminum to make airplanes.

Everybody was protective of their different ideas for aluminum that it took World War II to force everybody to do the real cost-saving things to share information, and build on each other’s research and development efforts.

What Tomlin did, in tipping the scales toward cooperation and sharing, was to persuade competitive companies to do it even without the pressure of war.

Commenting on this, Freeman said, was that Tomlin people were not to persuade competitors to do it even without the pressure of war.

“I think that’s the key to Tomlin’s success,” Freeman said.

Tomlin says that when he upgrades the wind tunnel and the test lab, he’s going to ask for another $150,000.

“One day, Laffin said, Tomlin told him to stop using a 42-inch plasma television monitor, to show data in the wind tunnel. They hung it on the wall, and shortly after that, Tomlin led a tour of pilots into the tunnel. He stared at the monitor, and then Laffin set on the wall.

“When did I promote you to buy a big screen TV?”

“You didn’t,” Laffin said. “You authorized a large-screen data display.

“The politician laughed,” Laffin said.

“Later, on John was going about what that display could do,” Laffin said. “But he was still interested about the expense.”

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“I don’t find any arrogance in the guy at all,” Brant said.

“John is really a sensitive people to get along with you. The reason he’s able to get so many competitors and others to go along with him is simple. Tomlin said.

“I decided from the beginning that I was going to listen a lot more than I was going to talk, I was going to ask people how we could help them rather than tell them how to build airplanes.

“I found out about this early on—that if you didn’t know what you were talking about, people here will straighten you right out away.

Which brings us back to that day in 1994 at WSU, when Tomlin, Ph.D., was not as humble as he is now.

“Any time a young Ph.D., you think you know everything,” he said.

“When I first arrived in Wichita State 16 years ago I taught a class.

“One day I told them how you build an airplane. A guy in the back raised his hand. An aircraft worker.

“Well, go ahead, the guy said. That’s not how we do it at Boeing.”

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putting our energy into Education

Black Hills Energy is offering 15 scholarships to high school students graduating in 2010 in our Kansas and Colorado natural gas service areas. The scholarships are for $1,000 each. Application forms will be available starting in participating high schools in February. Applications must be completed and returned by March 19 to Black Hills Energy External Affairs at the address below. Incomplete applications will not be considered.

Students interested in applying for a scholarship should contact their school counselor. The application area is available online. Go to www.blackhillsenergy.com/scholarships and enter your ZIP Code. Then choose “Scholarships” from the list.

Questions? Contact: Black Hills Energy
External Affairs Department
110 E. 5th St.
Lawrence, KS 66044
Or, call 785-832-3918.

Students are eligible to apply if they meet the following criteria:

- Parent or guardian is a natural gas customer of Black Hills Energy.
- The student ranks in the top 25 percent of his or her graduating class or scores 21 or higher on the ACT or 880 or higher on the SAT.

For a limited time, nonstop flights to Phoenix-Mesa from Wichita are on sale! Plus get a free night hotel stay when you book three or more nights! Click now to book your flight.

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