### **Technical Assistance Program**

A YEAR IN REVIEW • JULY 2004 - JUNE 2005



#### Building a Stronger Indiana



### **OUT MISSION:** INDIANA'S GROWTH AND PROSPERITY

Purdue's Technical Assistance Program moved in exciting new directions during the year chronicled in this report. TAP's stellar record of strong technical support for Indiana companies has led to important initiatives with government and private-sector partners.

In May 2005, TAP joined with the Indiana Hospital&Health Association and with Purdue's Regenstrief Center for Healthcare Engineering to launch the Healthcare Technical Assistance Program. Under this partnership, TAP — working with interdisciplinary teams from the College of Engineering and the School of Nursing offers operational improvement assistance to Indiana's 166 hospitals. Projects include patient flow, medical safety, pharmacy operations, and nursing improvements. In just its first three months of existence, Healthcare TAP undertook 14 projects.

In June, the Indiana Economic Development Corporation asked Purdue to take responsibility for the Indiana Manufacturing Extension Partnership Center. The MEP is a partnership with the National Institute for Standards and Technology, the State of Indiana, and manufacturing companies. The Indiana center has staff and partners throughout the state that support manufacturing companies with lean manufacturing, quality systems, marketing, and other key resources. Because of these new responsibilities, TAP's budget and staff have been increased significantly, and it will continue to provide the level and quality of support that have done so much for Indiana manufacturing firms since TAP's founding in 1986. During the fiscal year that ended June 30, 2005, TAP supported 424 Indiana companies and hospitals. In addition, it delivered some 9,500 documents through the Technical Information Service.

Indiana's initial investment in TAP in 1986 has paid tremendous dividends. Now we are sending this highly successful program across new frontiers, and I am certain we will see even more impressive results in the future. TAP is one of the keys to Purdue's wholehearted commitment to support our state's economy.

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Martin C. Jischke President, Purdue University



www.purdue.edu/TAP

Boosting profits. Increasing efficiency. Improving customer satisfaction. Competing on a global level. These are the challenges Indiana businesses face each day. We are here to help them.

Purdue's Technical Assistance Program connects Indiana businesses and local governments with the vast resources of Purdue University. Our mission is to strengthen the Indiana economy and improve the quality of life for all Indiana citizens. Over the last 19 years, we've:

- helped stem the state's braindrain by increasing the placement of Purdue graduates in Indiana businesses through job fairs and internships,
- strengthened the competitiveness of Indiana companies by assisting with state-of-the-art technologies, and
- improved and protected Indiana's environment by working with industry and wastewater treatment plants on pollution prevention and operational efficiency.

In the spring of 2005, TAP expanded significantly, enlarging the sectors we serve and the services we offer. Our funding sources for fiscal year '06 reflect new partners and programs.

#### ECONOMIC IMPACT DATA May 1986 - June 2005

Since 1986, TAP has completed 6,090 projects with partner companies. The cumulative results of our work include:

#### Savings and Investments\*

Capital investments: \$64 million Cost savings: \$28 million Increased sales: \$300 million

#### Employment

Jobs added: 1,590 Jobs saved: 2,580

\*Data is based on client evaluations of TAP assistance.

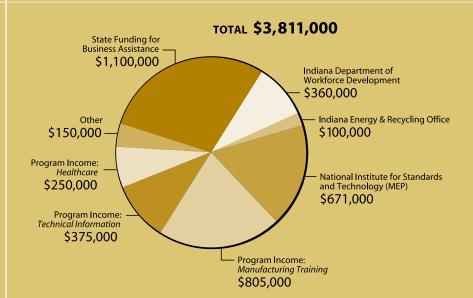
#### Companies Served

In 2004–05, TAP faculty, graduate students, and staff worked with 424 companies across Indiana.

Figures in each county designate the number of companies TAP served last year.



#### TAP Funding Sources for Fiscal Year 2006



# **Expert** Advice

#### DISTRIBUTION AND AUTO SERVICE INC. Lafayette, Indiana



Time studies performed by graduate student Amirali Noorinaeini (left) and Professor Mark Lehto, School of Industrial Engineering (middle), helped reassure Rocky Luna, general manager of DAS, that his company could take on the customization challenges of Subaru-Isuzu's 2006 lineup.

Accommodating the ever-changing customization needs of automotive manufacturers is the prime directive of Distribution and Auto Service Inc. (DAS). But when Subaru Indiana Automotive Inc. was preparing to roll its 2006 B9 Tribeca off the assembly lines, DAS managers at the company's Lafayette vehicle processing center wondered how they could accommodate the new product and associated accessories.

"I was looking at overall flows and procedures that were currently going on within the facility," says Rocky Luna, general manager. "I wanted TAP to validate our flows and methods, and hopefully, suggest some new process or procedure that we were not utilizing at the time."

Thankfully, Luna got just that from TAP's industrial engineering experts. After reviewing the company's metrics and performing time studies, they concluded the company could accept the new models without significant changes.

"More than anything, TAP gave us peace of mind with our existing layouts, and the ability to take on new business," Luna says. As the processor of 17,000 tom turkeys a day, Perdue Farms Inc. is an authority in grinding turkey. But when it came to reducing the average amount of meat that was being inserted into its one-pound packages, the company asked TAP for some statistical expertise.

"Our net weight ground turkey is one pound," says Steve Zeller, plant manager for the facility, which is the company's sole turkey producer. "Anything above that one pound is giveaway — the customer gets it for free." The facility's machines, however, were turning out packages as high as 1.12 pounds, significantly affecting profits.

Regina Becker, manager of Purdue's Statistical Consulting Service, placed the data in a bell curve, which indicated that the packaged meats were averaging 1.06 pounds. Those figures prompted Perdue staff to make small machinery adjustments. Ultimately, the facility decreased its average to 1.03, a quarter-million dollar annual savings.

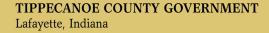
"I'm a firm believer that when you've got the data, it's hard to argue with," Zeller says. "TAP gave us the numbers we needed."

**PERDUE FARMS, INC.** Washington, Indiana



Data analysis provided by Regina Becker, manager of Purdue's Statistical Consulting Service (left), and graduate student Pang Du (right) helped Steve Zeller, plant manager, and Sara Hamdan, high performance work team coordinator, pinpoint ways that Perdue Farms could save money.

Each year, the Technical Assistance Program provides consulting, training, and implementation services for hundreds of Indiana companies, local governments, and nonprofit organizations. Our success is measured both individually by the companies we assist and collectively through the growth we witness in Indiana's economy.





As Tippecanoe County looked to enhance staff efficiencies, TAP offered its expertise. Here, Jennifer Weston, commissioner's assistant (left), and Commissioner KD Benson talk with Professor Rodney Vandeveer, Department of Organizational Leadership and Supervision, and graduate student Brian Leonard.

Tippecanoe County Commissioner KD Benson sees her local government as a forward thinking, professional operation. But like other entities around the state, the county's tax revenue can't keep pace with the rising costs of providing services.

"We have to find ways to improve and cut costs wherever we can," says Benson. One way is through more consistent job descriptions and performance evaluations that should lead to greater staff efficiencies.

In the past, job descriptions consisted of brief overviews. "TAP's organizational leadership and supervision experts helped us refine those using the people in the jobs themselves," Benson explains. Managers also created quantifiable evaluation instruments that correspond with the new detailed descriptions.

Ultimately, employees who clearly understand what's expected of them and how well they're meeting expectations should be more satisfied, more effective, and less likely to leave.

"Our government staff are certainly not experts in job performance and evaluation tools," Benson says. "Not only was the TAP team willing to assist us, but they also helped tailor the tools to meet our needs."

#### HEALTHCARE TAP

As King's Daughters' Hospital and Health Services finetuned its plans for a new obstetrics unit, administrators looked to Healthcare TAP consultants for a fresh perspective.

"First, we wanted to know whether or not we needed one Cesarean section room or two," says Carl Risk II, King's Daughters' vice president of planning. "Second, we wanted to see if there were any opportunities for improvements in the design or location of the obstetrics unit."

Through interviews and analysis, team members from nursing and industrial engineering concluded that one C-section room would meet patient population needs. They also presented the advantages and disadvantages of four different location options for the OB unit; the hospital eventually decided on the second floor of a new wing for quick access to the main hospital.

"One of our centers of excellence is Women's Services, and our objective is to improve patient care while growing the market share," Risk says. "Ultimately, Healthcare TAP helped us look outside our day-to-day scope as we work toward that goal."



Graduate student Guruprasad Sankaranarayanan (left) and Professor Pat Coyle-Rogers, School of Nursing (right), helped Debbie Bridges and other King's Daughters' Hospital administrators fine-tune plans for a new OB unit.

#### KING'S DAUGHTERS' HOSPITAL AND HEALTH SERVICES Madison, Indiana

# INDIANA'S KNOWLEDGE CAPITAL

Software leader Aprimo needed high-quality candidates for its On Track program. Managers found four at last year's High Tech Job Fair (from left): Jeremy Marshall, Keith Kunysz, and Travis Harlow, all from the Department of Computer and Information Technology; and Aaron Drake from the Department of Computer Science.

#### HIGH TECH JOB FAIR FOR INDIANA COMPANIES

How do Indiana employers compete with other companies nationwide for a select few technology grads? For companies like Indianapolis-based Aprimo Incorporated, the answer is through TAP's High Tech Job Fair for Indiana Companies.

At this annual fall event, Indiana employers connect with hundreds of Purdue students studying technology, engineering, management, science, and agriculture. In October 2004, 52 companies and 1,000 Purdue students attended the event, resulting in a number of full-time, internship, and co-op placements right here in Indiana. Aprimo is a global leader in enterprise marketing management software. The company, which helps marketing executives plan, implement, and track their efforts, netted four full-time hires for its northside headquarters. "It was a really great sourcing for us," says Stephanie Ragozzino, manager of global customer care for the business.

Aprimo's On Track program rotates talented graduates through various departments to give them a variety of experiences before settling into their permanent position. Aprimo managers were interested in finding students with APRIMO Indianapolis, Indiana

not only the right technological skills, but also strong communication skills. TAP facilitated that process through the job fair.

"The one thing we really like about Purdue is that in addition to teaching students specific technical skills, it also teaches students how to learn new skills as the market changes," says Ragozzino. "We're just thrilled with the graduates we've hired and are looking forward to more great hires next year."

For more about the High Tech Job Fair: www.purdue.edu/jobfair

TAP is committed to helping Indiana employers cultivate the state's talent base. Through placement services and training, we help businesses increase productivity, lower recruitment costs, and ensure that many Hoosiers stay here, where they're needed most.

#### TAP MANUFACTURING EXTENSION PARTNERSHIP

When O'Neal Steel asked each of its facilities to eliminate production waste through continuous improvement processes, Scott Young called the Technical Assistance Program for help.

"Lean manufacturing is where most original equipment manufacturers are headed," says Young, regional operations manager of the Shelbyville plant, which sells value-added steel products to the material handling, railroad car building, construction equipment manufacturing, and transportation industries. "The worst thing that could happen to you as a supplier is your customers go lean and you don't." To jump-start the process, TAP staff conducted Lean 101 classes at the plant for salaried, administrative, and hourly team members. Now the company is implementing lean manufacturing based on value stream studies it has conducted. Post-class ratings indicate that employees are responding positively, which Young partially attributes to TAP.

"They have a lot of experience in this kind of process transformation, and understand the challenges we're facing," Young says. "No matter what happens, they've been through it before, so they have suggestions for what might work." O'NEAL STEEL INC. Shelbyville, Indiana



Jim Handy, account manager with TAP's Manufacturing Extension Partnership Center, consults with Matt Comstock, burner operator, and Mike Mattingly, laser operator, both with O'Neal Steel. Lean 101 classes for managers and staff helped to jumpstart the company's lean manufacturing process.

#### SUMMER INTERN PROGRAM



Lorien Arundel Knapp's internship at Biddle Precision, made possible through TAP, turned into a full-time, permanent position for the recent Purdue graduate.

#### 2004 Job Fair Data

Businesses in attendance: 52 Students in attendance: 1,000 Most companies don't have the luxury of auditioning prospective employees. But that's exactly what Biddle Precision in Sheridan did through TAP's summer intern program. While initially the OEM manufacturer saw Lorien Knapp as a temporary team member, managers soon realized her long-term potential.

"She had great project management skills," says Lean Manufacturing Engineering Manager Deborah Applegate, who was impressed with Knapp's performance in the quality department.

The esteem was mutual. When Knapp was offered a position with General

#### High Tech Job Fair Dates

October 26, 2005 October 25, 2006 October 31, 2007

#### BIDDLE PRECISION COMPONENTS Sheridan, Indiana

Electric, she turned it down to remain with Biddle instead. "I admired the people that I worked with," says Knapp, a mechanical engineering technology graduate. "I thought I would have an opportunity to make a difference."

Applegate, a Purdue alumna who's hired three College of Technology graduates for Biddle, is delighted with the interns that TAP has sent her way. "They truly have application skills," Applegate says. "We would definitely sign up to do a project with TAP again."

For more about TAP's summer intern program: www.purdue.edu/TAP/intern

#### 2005 Summer Intern Data

Participating businesses:42Participating students:60

## Expertise for any need

TAP provides up to five days of free, confidential consulting on a full range of business and technical issues including:

- Advanced manufacturing
- Business management
- Human resources
- Information technology
- Environmental issues
- Product development and engineering\*

\* TAP does not support projects involving litigation. Projects involving the development of intellectual property require written contracts.

TAP offers training and technology implementation on a funded basis. Offerings include:

- Lean manufacturing
- Quality systems
- Team building, problem solving, and leadership training
- Information technology security profiles
- Customized training for the healthcare sector
- Energy reduction



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PURDUE UNIVERSITY

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