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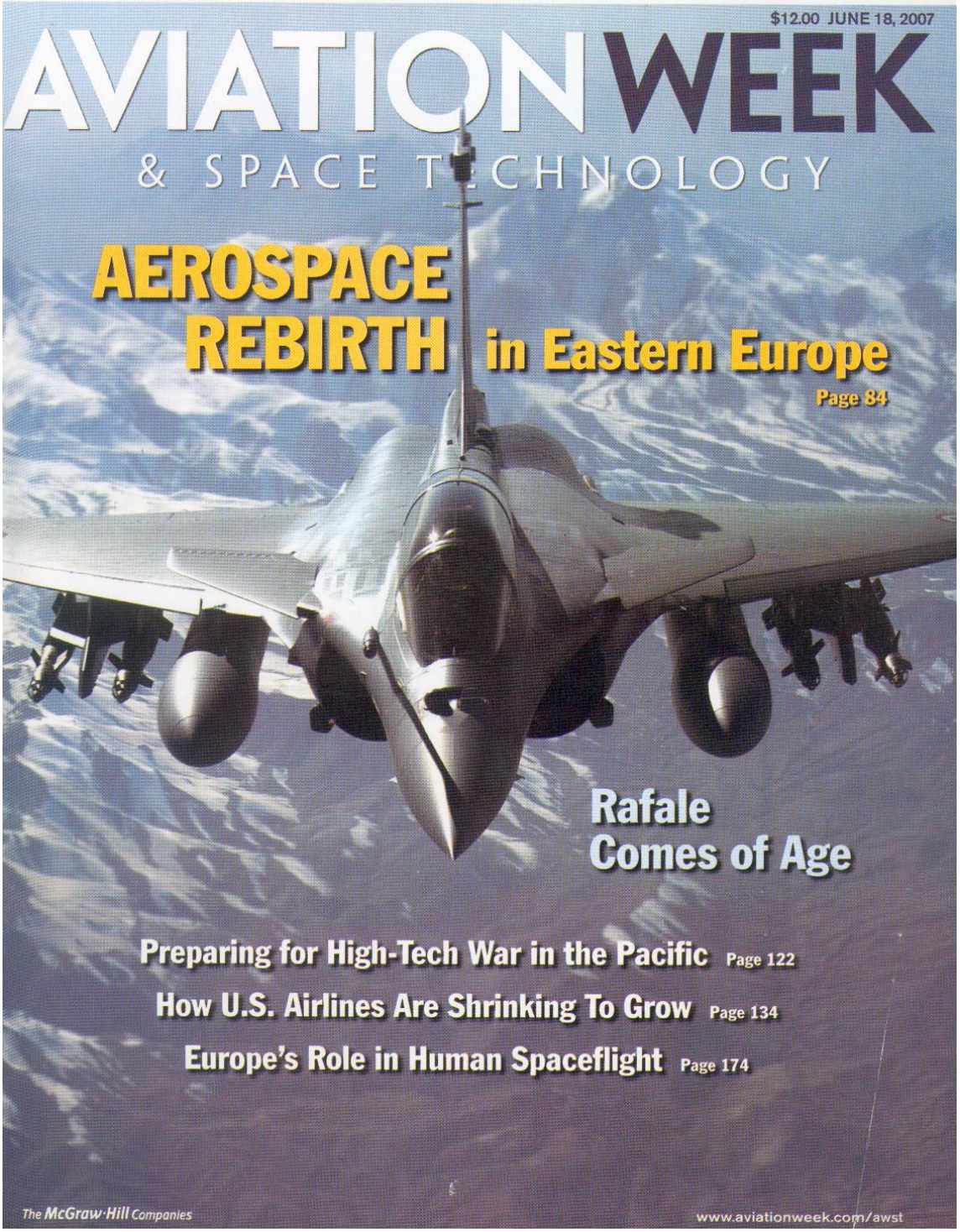

AEROSPACE REBIRTH in Eastern Europe

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Poles, Czechs try to revive their aerospace prowess. But in a globally competitive market, can both make it?

JOSEPH C. ANSELMO and ROBERT WALL/RZESZOW, POLAND, and BRNO, CZECH REPUBLIC

The end of the Cold War brought freedom to Eastern Europe, but it nearly smothered the life out of PZL-Krosno. When the Soviet Union disintegrated, 90% of orders at the Polish landing gear manufacturer vanished overnight. Annual sales fell below $1 million and the government-owned company shrunk to a skeletal staff of 130, down from a Cold War high of 2,000.

Today, the Polish facility has a new lease on life as an important link in the Western aerospace and defense (A&D) supply chain. Privatized and now owned by Goodrich, the Krosno plant produces landing gear components for F-16 and F/A-18 military fighter jets, with plans to build F-35 Joint Strike Fighter parts. It supplies similar hardware for an array of civil aircraft built by Boeing, Airbus, Bombardier and Gulfstream. Costs are low, sales and productivity have soared, employment has more than tripled and the modernized plant looks like any of Goodrich's 82 other facilities—save for two large crucifixes hanging on the factory walls.

After losing most of their sales when the Cold War ended, Poland and the Czech Republic, Eastern Europe's two largest A&D producers, are rising from the ashes—or at least trying to. They're aiming to leverage the benefits of low-cost labor and aviation heritages that began before World War II to carve out new roles in 21st century A&D, often in surprising or ironic ways.

Czech-based AeroVodochody now supplies gun bay doors to Boeing for F/A-18s using some of the same tooling that manufactured Soviet MiGs. Most of the landing gear parts for the 737, Boeing's most popular airplane, now originate in Poland. A Western ambassador taking a tour of Ultratech, a small, privately-owned aerospace supplier, was shocked to discover that high-quality 737 components were being produced in a cramped basement.

But when it comes to the privatization of their aerospace industries, Poland and the Czech Republic often take divergent paths. The Czechs are seeking investors to help pay for programs they design and manage. A top priority of Czech aerospace leaders is to remain end-to-end producers of aircraft by carving out a niche in the lower end of the general aviation market. But companies leading such endeavors often lack the money to carry them through.

By contrast, the Poles are more focused on becoming component producers for an increasing global aerospace supply chain. Their government has sold many of the nation's legacy aerospace operations to Western investors that agree to introduce new technologies and production processes, invest in modernization, guarantee employment levels and provide an entree to big aircraft programs.

Across a swath of southeast Poland christened "Aviation Valley," outdated factories that formerly produced Soviet aircraft components have been snapped up—or completely new operations have been launched—by companies such as Goodrich, Pratt & Whitney, Sikorsky, Safran and Ladish. The renewed spark they are bringing to Polish aerospace is also spawning a new generation of low-tier startups such as Ultratech, which receives more than 60% of its sales from Goodrich Krosno.

Among some entrepreneurial companies, the growth pace can be remarkable, with revenues doubling from year to year. "What we suffer most from is a lack of time," says Miloslav Funda, a sales manager at Prague-based LA Composite. The frenetic pace at the company, which is adding employees almost weekly to keep up with the demand for composite parts, is evident. It is a supplier for Eurocopter, whose order book

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is booming, and it provides parts for Airbus, too. "Capacity is our weak point," adds Bohuslav Cabrnoch, the company's managing director.

To keep pace, LA Composite is installing new equipment and looking for space to expand. Moreover, the 75-employee operation is trying to build up its critical mass to bid for larger work packages from the likes of Airbus and AgustaWestland. Several years ago Mitsubishi Heavy Industries came looking for partners, Cabrnoch says. At the time, LA Composites didn't have critical mass, and the Japanese struck up a relationship with Fischer Advanced Composite Components, a larger company in neighboring Austria. "Now," Cabrnoch insists, "we're prepared for this competition."

Eastern Europe's low costs are a big driver of such growth. At Goodrich Krosno, salaries are about €6,000 ($7,980) a year for blue-collar workers and €9,000 for their white-collar counterparts—far below comparable wages in France, Germany, the U.K., Canada or the U.S. "I think you'll see us moving from Western Europe into Eastern Europe, and Poland is a place where we want to do more," says John Grisik, Goodrich's executive vice president for operational excellence and technology. "I don't want to say we're not productive in France. But I don't think there's any question that from a labor cost perspective Eastern Europe is much less expensive."

Some French companies feel the same way. In 2001, Snecma, now a subsidiary of the Safran Group, decided to open a low-cost facility in Aviation Valley to bolster a bid to sell Mirage fighter jets to Poland. The government opted for F-16s instead, but Snecma stayed. The operation, Hispano-Suiza Polska, supplies an ever-increasing number of low-cost transmission and aircraft engine components to Safran. President/General Manager Ryszard Legiewicz says sales are on pace to double this year to €13 million, up from €500,000 in 2003. Envisioning even more work being shifted from France, he has drawn up plans to expand the company's facility, a former furniture factory.

WSK PZL-RZESZOW PHOTOS

WSK PZL-Rzeszow's decrepit sheet metal operation (above) was completely gutted and modernized after United Technologies Corp. acquired a controlling interest in the Polish aircraft engines and components company in 2002. The same facility, shown today in the photo at top center, has a similar design to UTC Pratt & Whitney plants in the U.S. and Canada.

Of course, "low-cost" is a relative term. The wages earned by Polish workers are hefty compared with what companies can find if they outsource work to China or India. But Eastern Europe still offers something that China or India can't: Aerospace infrastructure, capabilities and workers. "It's not easy to set up in a place where you have zero aerospace history," says Jan Sawicki, general manager of Goodrich Krosno.

Still, companies in Eastern Europe face pressures that will gradually erode their price advantage. The low-wage advantage will not last 25 years, concedes Milan Holl, president of the Czech aerospace association. Managers for several Eastern European companies also note that they are experiencing wage inflation of approximately 5-6% a year.

Moreover, Poland and the Czech Republic are on track to eventually become euro-currency members (although no formal date has been established), which will likely drive up

prices in general. And some of the tax breaks governments have granted for certain industrial zones are scheduled to expire in about a decade. Industry officials are confident that, by that time, they will have solidly reestablished their companies as aerospace centers. Continued growth in efficiency and productivity, says Sawicki, will help mitigate some of the cost headwind.

What could help the Poles and Czechs in particular is that they are NATO allies. That means prime contractors often can win U.S. government permission to offshore military component work to Eastern Europe that they could never send to China. "Having a Czech company build gun bay doors or having a Polish company build wing structures just isn't a big deal," says Jim Hasik, a defense consultant with CRA International who follows aerospace operations in the region. "It probably would raise more eyebrows if you had a French company do it."

The Poles are keenly aware of such sentiments. "I think the next step in our development will be doing more military, especially with the Americans, because [they] are our allies," says Andrzej Rybka, executive director of the Aviation Valley Assn., a trade group that represents most of Poland's aerospace companies.

That there's ample room to develop the military market is a view shared by others. Western European companies need to embrace their eastern partners, urges Nick Whitney, the departing chief executive of the European Defense Agency. In particular, he believes prime contractors need to do more to help small- and medium-sized companies. Western companies look to Eastern Europe "too much as markets to sell in, rather than as industries to invest in and to work with," he argues.

AEROSPACE IN POLAND AND CZECH REPUBLIC

	Poland	Czech Republic
Companies	70	About 65
Employment at end of Cold War	60,000	30,000
Current employment	20,000	7,900
Share of sales that are exported	90%	82%

Sources: Aviation Valley Assn. (Poland) and Assn. of the Aviation Manufacturers of the Czech Republic

A notable but uneven increase in business savvy among Polish and Czech executives hasn't come easily. Marek Darecki was marketing director of Polish aircraft engine supplier WSK PZL-Rzeszow when Russia suddenly stopped paying for its orders in 1990. Desperate for new customers after the factory had to lay off 6,000 workers, Darecki found the general address for Rolls-Royce in a newspaper. "So I sent them a letter," he recalls. "It began: 'Dear Mr. Rolls-Royce.'"

Today, the gregarious, silver-haired Darecki has a much smoother pitch as president and general manager of the company—now a subsidiary of United Technologies Corp. (UTC)—and as president of the Aviation Valley Assn.

UTC, which also owns Pratt & Whitney and Sikorsky, acquired an 85% stake in PZL-Rzeszow for $70 million when the plant was privatized five years ago. UTC has put another $100 million into the 70-year-old company and has undertaken an extensive modernization of the operation, which currently produces engine components and was rated Pratt Canada's top supplier. UTC won't divulge a specific breakout of sales at the 3,800-employee operation, but Darecki says they've quadrupled in the last five years. PZL-Rzeszow has also shed extraneous businesses, including a construction company, hotels, a cultural center and a soccer stadium (a pig farm was sold off before UTC bought the company).

Just how beneficial has the experience been for UTC? Perhaps the best measure is that the company is willing to do the same thing again. Its Sikorsky unit has taken over aircraft-maker PZL Mielec, where it will build UH-60 Black Hawk helicopters. The first helicopter built at the facility is to be delivered in 2011. As was the case with engine maker PZL-Rzeszow, the current facility will be gutted and rebuilt to the most modern standards. Already up on the walls are UTC signs spelling out the company's ethics and employee standards. Workers hold out great hope that this arrangement will guarantee their future. "Mielec was the capital of aviation in Poland," says the facility's director general, Janusz Zakrecki. "Over the past few years we were not happy with our situation, but our vision is to return us to the position we deserve."

The success experienced by pioneers like Goodrich and UTC is helping drive other manufacturers to establish themselves in the region. Germany's MTU Aero Engines late last month announced it would build a new facility in Rzeszow, the city at the heart of Aviation Valley. The factory will be built this year and production should start in 2009. MTU will spend €50 million on the site, and from 2011 on expects the location to add €15 million to the company's bottom line, largely due to lower costs. By 2012, MTU Aero Engines Polska is projected to have 400 employees in Poland. "Our intention in not just shifting work to Poland," says MTU CEO Udo Stark. "Our major goal is to generate further growth."

But as production rises, Eastern European A&D companies are facing a problem that bedevils many of their counterparts in Western Europe and the U.S.: A shortage of skilled workers. In that equation, low wages are clearly a disadvantage. "Young engineers go to Prague or Germany," says Antonin Sojak, marketing manager at Mesit Pristroje, an aircraft instruments company in the southeast corner of the Czech Republic. "Foreign companies offer better salaries to engineers than here."

Roman Planicka, executive director of nearby LET Aircraft Industries, notes that with the Czech aviation industry in decline for years, A&D no longer holds the allure it once did for promising students. "There wasn't much attraction to studying aviation engineering," he says. "Everybody wants to be a lawyer or a marketing director."

Inter-Informatics, a Prague-based pre-engineering house, has been battered by delays and reorganization at Airbus, its biggest customer. But Jiri Polacek, one of the company's owners, says he doesn't dare lay off computer-savvy employees. "If we release our people it will be quite hard to get them back," he says. Instead, he is trying to find new tasks for workers until business from Airbus picks up.

One way to address the problem is workforce training, a task the Poles in particular are approaching with vigor. Another solution may be for the East to look even farther East. During the Communist era, Darecki used to drive to nearby Ukraine—then part of the Soviet Union—to find shoes for his daughters. Today he goes there to look for low-cost suppliers. "As we are low-cost for North America, Ukraine is a low-cost option for us," he says.