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‘Expertise-Driven Design’

At EYP Architecture & Engineering, growing the business goes hand in hand with growing the firm’s people.

By Robert Cassidy, Editorial Director

EYP Architecture & Engineering designers review drawings for a historic preservation project. The firm’s in-house education forum, EYP/U, provides staff with about 20 courses a year; all courses are accredited by both the AIA/CES Discovery program and the Green Building Certification Institute.

With annual revenues above \$60 million and a staff of 300 working out of six offices—Albany, N.Y., Boston, Greenville, S.C., New York City, Orlando, and Washington, D.C.—EYP Architecture & Engineering (the former Einhorn Yaffee Prescott) is a powerhouse A/E firm that packs a solid punch in the higher education and federal government building sectors along the East Coast. If its strategic plan plays out as management hopes it will, EYP may soon be an even greater force across the entire country.

To get a feel for where EYP is today and where it’s headed, you have to go back to 2001, when Einhorn Yaffee Prescott had 700 employees, half of whom were designing data centers for the then-exploding dotcom market. Offers to buy the mission-critical division were coming in from everywhere. “The phone was ringing off the hook,” recalled president/CEO Tom Birdsey, AIA, LEED AP. In June 2001, the firm was split into two independent companies, with TA Associates, a private equity firm in Boston, buying the mission-critical division (it was sold to Hewlett-Packard in 2009). Eric Yaffee and Andy Prescott retired, while Steve Einhorn assumed leadership of the mission-critical group.

MAKING THE BREAK

The “other” half of the original firm was purchased by five of the remaining principals, three of whom are still with the firm: Ed Kohlberg, LEED AP, Government Sector Leader; Andy Wong, AIA, NCARB, Science + Technology Leader; and Birdsey, who took over the CEO role in 2005 from Cahal Stephens, who retired in 2009. Other shareholders were also allowed to reinvest in the new firm. “It was a big ownership transition for us,” said Birdsey.

By 2004, the new owners were in discussions with clients, contractors, and industry peers about the future direction of the reconstituted EYP. From these inquiries, it became clear to EYP’s management that the firm needed to solidify around its long-standing reputation in historic preservation and higher education. “They told us they respected us for our ‘expertise,’” said Birdsey. “The light bulb went on, and we saw we needed to make a stronger statement about our design capabilities, marry it with our expertise, and turn it into a powerful new brand: ‘expertise-driven design.’”

EYP embarked upon a major reorganization. The firm ditched its K-12 practice, which was viewed as incompatible with the new brand. Selective hires were made to beef up design expertise in certain areas. Project teams were deployed across offices, based on expertise: “project director,” “project expert,” and “lead designer” became the senior-most titles on any job.

Inside the EYP Benefits Package

- **Performance-based compensation** program for all 300 employees. Payouts distributed once a year, based on meeting firmwide, team, and individual goals; these can range from 8-10% for junior staff to 20% or more for project team leaders. Over the last six cycles, EYP paid out more than \$6 million.
- **Flex hours** for child or elder care, lifestyle accommodation, degree-related education, or teaching. Core hours: 9:30 a.m. to 3:30 p.m. Eastern. In one case, an employee returning from maternity leave was granted a flex schedule of 24-30 hours a week, three days a week, for a two-month period, after which she returned to work full time.
- **Compressed work week** (four days) for employees who need a temporary accommodation.
- **Professional Development System** identifies competencies each employee needs to be successful and provides career pathing and professional skill building.
- **\$1,500 bonus** for passing RA or PE licensure exam.
- **Paid time to interns for licensure study:** 24 hours of paid study time, 40 hours to take all exam sections.
- **Personal leave bank:** Personal time and sick time are combined to allow staff greater flexibility in managing their leave.
- **Tuition reimbursement** for approved courses (\$2,500/year).
- **Wellness program**, including free pedometers to all staff.
- **Young Designer Award** to young architects and engineers who make firmwide design contributions in support of strategic initiatives.

Most important, laserlike focus was directed at the two markets where its knowledge and expertise stood out: higher education, largely at eastern U.S. colleges and universities, but also overseas (the Azerbaijan Diplomatic Academy, in Baku, being a recent example); and federal buildings, notably for the State Department (both foreign embassies and stateside office buildings), the National Park Service, the National Archives & Records Administration, NAVFAC, the U.S. Military and Naval Academies, and the Army Contracting Agency. These two markets now account for more than 90% of EYP’s revenues.

The next seismic shift for the firm started taking place about five years ago. “Oil went up over \$100 a barrel, and we were seeing the beginnings of another energy crisis,” said Birdsey. The firm once had a small presence in energy conservation in the ’70s but that business had been allowed to go dormant. With the new emphasis on global warming, Birdsey saw that it was time to rejuvenate that practice.

“We hired a few key people to lead that group and began winning work from state agencies and utilities that have energy-savings incentive programs for commercial building owners,” said Birdsey. Today, a staff of about 25 engineers and designers are carving out their own projects while also consulting to the rest of EYP for work involving corporate, institutional, and government clients.

Even though the energy group contributes only about \$5 million of EYP’s \$62 million annual revenues, energy consulting complements the firm’s other expertise areas and helped it win one of the most prestigious jobs in the world: the preservation of the United Nations headquarters building in New York. “The energy component is the most exciting part of our business,” says Birdsey.

A SERENDIPITOUS TAXI RIDE

That might not have been the case had not Birdsey found himself stuck in Washington’s Reagan National Airport one stormy afternoon in the summer of 2006. All departures were being cancelled, so Birdsey offered to share a cab to BWI airport with a fellow traveler who also happened to be from Albany. En route, Birdsey told his new acquaintance, Pradeep Haldar, PhD, about his firm’s energy-related initiatives. “I want you to come to my office at 10 tomorrow morning to meet my boss,” said Haldar.

Haldar’s boss turned out to be Alain Kaloyeros, PhD, director of what was then the Nanoscale Science & Engineering Facility at the University at Albany, part of the State University of New York. Kaloyeros, who has been described as “a charismatic physics researcher who wears designer jeans and drives a Ferrari,” had created a largely state-funded public/private “center of excellence” devoted to nanoscience research.

“Most of their work was in microelectronics, but Kaloyeros told me they wanted to branch out into other areas—PVs, fuel cells, ultracapacitors, and so on,” said Birdsey. “They were convinced that nanotechnology could make these devices more affordable, and they were looking for a private-sector partner to help them understand

At the helm: 'We're looking west for acquisitions,' says CEO Tom Birdsey

Tom Birdsey, AIA, LEED AP, joined EYP in 1978 and has been president and CEO since 2005. Born in South Bend, Ind., in 1950, the younger of two boys, he grew up in nearby Elkhart. His late father was a traveling salesman for U.S. Tobacco who sold gadgets on weekends to make extra cash; his 93-year-old mother worked as a bookkeeper/administrative assistant and still does volunteer work in Traverse City, Mich. A graduate of Rensselaer Polytechnic Institute, he and his wife Karen, a nurse practitioner, have a melded family of four sons and one daughter, ages 18 to 33. The couple live in suburban Albany and are renovating an Adirondacks-style camp/retreat on the western shore of Lake Champlain to sustainable standards.

Birdsey chairs New Energy New York and serves on the boards of the Capitalize Albany Corporation, the Eastern NY Regional Advisory Board of First Niagara Bank, and the New York State Archives Partnership Trust. He was instrumental in the founding of the National Institute for Sustainable Energy, a center for research into zero energy use and building sustainability.



EYP CEO Tom Birdsey pilots his 1971 Outrage, one of seven vintage Boston Whalers he has owned. He is currently reconditioning six—three sailboats and three powerboats, dating from 1963 to 1984. “They’re unsinkable and indestructible, some of the best examples of industrial design you’ll find anywhere,” he says of the older Boston Whalers. “They just don’t make ‘em like that anymore.”

BD+C: This past August, you sold a minority interest in the firm to Long Point Capital, a private investment firm based in New York. What was the thinking behind that?

TB: It goes back two years or so. We were growing, even though the economy was terrible, and we thought, This is great! But we found that, as we qualified for even bigger projects, some bigger firms were going after projects in our areas of interest. Almost overnight we found ourselves competing with firms five, 10, 20 times bigger than us.

Like many A/E firms, we also had some principals with significant ownership who wanted to get their money out. We weren’t too thrilled about being acquired, so we looked at several private equity firms, and we found Long Point. We decided that was the way to get the capital to allow those who wanted to take their equity out of the firm without compromising our growth plans.

BD+C: How are things working out with Long Point?

TB: Our day-to-day operations are no different than before. They’ve been very supportive as long as we tell them what we’re going to do, and do it—and then remind them that we did it. In my mind, it’s the best decision we ever made.

BD+C: You’re in the \$60-65 million range in annual revenue, but you’ve said you want to take EYP to \$100 million. How do you propose to do that?

TB: The next step for us is to go deeper where we’re already strong—government, higher education, and now energy—to grow internally, but also to do acquisitions. We’re looking to expand geographically. Even though we work all over the world, we’re thought of as an East Coast firm. So, yes, we’re looking for acquisitions. We’re in discussions with some people and hope to be in discussions with some more. Our number one targets are the Midwest and the West Coast.

BD+C: How else are you differentiating the EYP brand?

TB: We need to be able to say to our clients, “Here’s the benefit to you of our expertise,” and we want to be able to quantify it. For example, when we do science buildings, we want to show that the faculty will be able to teach more effectively, that students will be more interested in the science. With our clients’ help we’re doing surveys, and we’re just now getting enough data to start showing the trends and results. It’s kind of new for us, but quite exciting.

We’re doing the same thing with the energy-efficiency performance of some of our buildings. Our clients are asking us for very sophisticated systems, but they don’t always have the capability to operate the buildings the way they should be operated. NYSERDA helped underwrite costs for the analysis of how these buildings were operating, and we’re finding that they were failing miserably because the facilities staffs had

not been given the training they needed and the third-party commissioning was inadequate. We’ve taken that on as a new service for some of our clients.

BD+C: Half your revenue comes from federal work. How is that business holding up?

TB: It’s been a bit more challenging with the federal government—delayed spending, cuts, etc. This is the first year that we’ve struggled to hit our revenue goals in this sector, but we’ll make it. We’re also looking to do a little more corporate work for clients like GE, Global Foundries, and Disney, through our Greenville, S.C., office, where we’ve been able to recruit some more engineers into the firm.

BD+C: What’s your biggest worry?

TB: Keeping everyone busy. Wondering if we’re going to win the next job. We want to work for clients that appreciate the value of our expertise, and if they’re not willing to compensate us for that level of expertise, then we’re not going to chase every job that’s out there.

how the technology could be incorporated into buildings.”

Birdsey leaped at the chance to work with the facility, now known as the University at Albany College of Nanoscale Science and Engineering. “Our agreement with CNSE is to do joint research, outreach, simulation, monitoring, and training,” he said. With grants from NYSERDA and utility companies, EYP is monitoring and conducting research on the photovoltaics at the nanotech center. As further evidence of its commitment, the firm recently moved its Albany office into the research complex.

Birdsey admits that it’s hard to put a dollar value on the firm’s partnership with the nanotech center, but he’s convinced that it’s taking EYP in the right direction. “This move has made us better architects and engineers, because we can go to our clients and say, ‘Here’s the technology that’s going to go into buildings in five or 10 years, and we can design your building to be ready for that technology,’” he said. “This gets us into meetings with anyone who comes in wanting more energy-efficient buildings.”

One sign that Birdsey has made a good bet: Last April, the U.S. Department of Energy awarded the CNSE \$57.5 million in seed money to establish what could become a \$500 million U.S. Photovoltaic Manufacturing Consortium devoted to driving down the cost of manufacturing PVs and displacing China and Germany as leaders in the global solar market. “They are now the center of PV manufacturing in the U.S.,” said Birdsey.

“It’s the right place for us to be because it reinforces our culture of expertise and makes our people more valuable to our clients,” he said. “We’re surrounded by researchers and graduate students and private companies that are coming in from around the world. In my opinion, only good things will come from this relationship.”

EDUCATION WITH A STRATEGIC PURPOSE

Continuing education is at the top of EYP’s priority list. “Our educational programs are a critical part of our strategic plan,” said Leila Kamal, AIA, LEED AP, VP of Design and Expertise. EYP/U, the firm’s in-house education program, averages 20 courses a year (both AIA/CES- and GBCI-approved) in five categories: project delivery and technical expertise, design and expertise, strategic technologies, energy and sustainability, and leadership and personal development. The company invests \$250,000 to \$425,000 annually in EYP/U.

EYP/U courses are aligned with the firm’s strategic plan. Certain courses are required—for example, all project directors have to take a course on facilitation skills—while others are “highly recommended” or “general” (e.g., to earn AIA or GBCI learning units).

In-house instructors are chosen in part based on their teaching experience; all must take an internally developed “train-the-trainer”



PHOTO: COURTESY EYP ARCHITECTURE & ENGINEERING

Albany, N.Y.-based employees of EYP worked on a Habitat for Humanity project in the state’s Capital District. Funds for the project were raised by EYP staff.

ENABLING SOCIAL RESPONSIBILITY

The firm and its employees make their presence known in the communities they serve:

- Employees are active in CANstruction, the ACE Mentor Program, the National Multiple Sclerosis Society, Locks of Love (hair donation fundraiser), Walk for Hunger, Heifer International, and the Earth Day Charles River cleanup.
- In 2009, the firm and its employees contributed \$1.3 million in cash, in-kind design services, and volunteer hours to social and community programs.
- In 2004, Sara Stein, AIA, LEED AP, an architect in the Albany office, helped form the “Alliance for Emerging Designers” in New York’s Capital District. The group designed and built a sustainably designed home for a Habitat for Humanity family.
- EYP Planet is the firm’s commitment to reducing its carbon footprint 5% a year (about 100 metric tons of carbon dioxide equivalent per year) to achieve carbon neutrality by 2030.
- Leila Kamal, Vice President of Design and Expertise, and project executive Heather Taylor, AIA, LEED AP, served on the planning committee for the 2010 AIA National Women’s Leadership Summit, whose goal is to promote visibility of the work of women in architecture.
- The Washington, D.C., office is active in the “Architecture in Schools” program to encourage students, teachers, and designers to bring architectural concepts into curricula.

course. In addition, first-time instructors get help with course development and rehearse their presentations with the HR staff.

The A16/E10/AE16 system, which was developed five years ago at the advent of BIM, is another unique feature of EYP’s education program. “We were finding that younger staff had great computer skills, but they didn’t necessarily understand building technology,”

said John Pcorobba, AIA, LEED AP, Vice President of Operations. “We were concerned that this could create a roadblock for implementing BIM in the firm.”

A16 (for architects), E10 (for engineers), and AE16 (for architect/engineers) are intense programs designed to provide systematic technical and leadership training. For example, A16 runs 16 younger staff through 16 education modules over a 16-week period. (E10 and AE16 follow a similar pattern.) There’s a mix of lectures, hands-on activities, drawing, field trips to construction sites, and a two-day retreat with senior leaders of the firm. “It’s one of the ways we acknowledge the four generations we have in our workplace,” said Melissa Lessor, SPHR, Chief Human Resources Officer.

The firm’s Intern Development Program (an AIA award winner in 2003) is both “comprehensive and structured,” said Pcorobba. Each office has an IDP program coordinator. Every intern has a senior-level sponsor, who must meet with the intern for at least two hours a month for exam preparation, general career guidance, or work assignment coordination. Eight one-time interns have been hired as full-time employees after completing the IDP program.

Mentoring at EYP takes a progressive “up/down” approach—it can sometimes be a two-way street. “We’ve had examples where

the younger people have helped their more senior mentors with BIM concepts, or even with tools like IM,” said Lessor. The program is also highly structured. For example, if a senior designer wishes to mentor a younger designer, he or she must submit a formal program stating the “mentee’s” goals—“Be involved in a client presentation,” “Conduct research on a specific building type”—and a plan for achieving them. “Mentors are scored on their performance,” said Kamal.

Mentoring flows throughout the EYP culture. “We have panel discussions involving three of the most senior people in the firm, and we give the mentees access and explain how they fit in the strategic plan of the organization,” said Lessor.

Since 2005, the firm has been employing the DiSC behavioral modeling system to encourage team building; nearly two-thirds of staff have participated. (Each participant gets a colored baseball cap indicating his or her behavioral style.) “The teams seem to want to stay together, and it carries over into their problem solving, critical thinking, and conflict resolution,” said Lessor, a certified DiSC trainer and coach. Additional leadership and executive training is provided through a “360” feedback mechanism and one-on-one executive coaching.

A plan review for a university client. EYP Architecture & Engineering placed No. 13 among A/E firms in 2010 revenues in BD+C’s Giants 300 rankings, with \$61.7 million in total revenues. The firm ranked 11th among design firms in higher education work, with \$29.6 million in university-related fees.



PHOTO: ERIC LEVIN, ELEVIN PHOTOGRAPHY

EYP professionals have taken advantage of these many education benefits to gain professional recognition. Counting duplicate titles, the firm has 41 AIA members, 138 LEED APs, 65 RAs, 33 NCARB members, 19 PEs, two Senior Professionals in Human Resources, and two Professionals in Human Resources.

PROVIDING THE TOOLS FOR SUCCESS

The firm also invests heavily in technology: BIM software—for architecture, MEP, structure, telecom, energy, and fire protection—and SharePoint, plus \$75,000 in a LifeSize high-definition audio/video system (“The Huddle”) that links the offices. “It’s booked at least two-thirds of the day, so it’s not collecting dust,” said Brad Horst, AIA, EYP’s Chief Information Officer. Counting only the savings in averted travel, the system paid for itself in just one year. The Huddle is also being used to transmit EYP/U courses across the offices.

LifeSize is compatible with WebEx and other platforms, which has allowed EYP staff to link to clients. “We’ve had meetings two or three times a month with Emory University on work we’re doing at their Oxford campus,” said Kamal. As a result, there’s been less need for travel to in-person meetings, which reinforces Emory’s sustainability mission, as well as EYP’s.

Voluntary turnover at EYP is 5%. Thirteen former employees have returned to the firm in the last few years as “boomerangs.” One factor in achieving employee satisfaction is the company’s truly open book policy: For more than 20 years, management has issued a financial scorecard at quarterly staff meetings. “People love to be included, and it allows them to relate the firm’s scorecard to their own performance-based compensation,” said Pocarobba. “People who join us from other firms say they’re amazed at how open we are.”

Stirring the Alphabet Soup: BIM and IPD at EYP

“We’ve been executing with BIM since 2006,” noted Brad Horst, AIA, EYP’s Chief Information Officer. He and John Tobin, LEED AP, Director of Architecture, have shaped the firm’s approach to BIM and, more recently, its relationship to integrated project delivery. Here are several of their seminal articles on BIM and IPD, from *Design Intelligence* and *AECbytes*:

“IT for Strategic Advantage,” featuring Horst’s “Create/Capture/Share” IT strategy:
http://www.di.net/articles/archive/it_strategic_advantage/

“Writing the Digital Project Story,” Brad Horst:
http://www.di.net/articles/archive/digital_story/

“Proto-Building: To Build is to BIM,” John Tobin:
<http://www.aecbytes.com/buildingthefuture/2008/ProtoBuilding.html>

“Atomic BIM,” John Tobin: <http://www.aecbytes.com/buildingthefuture/2008/atomicBIM.html>

A well-conceived strategic plan, firmly executed. Dedication to training and continuing education. Service to the community. These are the components that make EYP Architecture & Engineering a *BD+C* “Best AEC Firm to Work For.” **BD+C**

Research Initiatives Enhance ‘Expertise-driven Design’

To expand its technical horizons, EYP is engaged in several research initiatives that align with its strategy of providing high-quality expertise:

- **Photovoltaics.** EYP is partnering with the University at Albany College of Nanoscale Science and Engineering (CNSE) and Alteris Renewables to establish the Photovoltaic Control and Monitoring Center, part of a \$1.35 million solar demonstration initiative to evaluate and compare thin film-based solar PV technologies.
- **Renewable energy.** With the CNSE, EYP helped create a \$3.5 million National Institute for Sustainable Energy (NISE), which is dedicated to research, simulation, monitoring, training, and outreach related to energy efficiency and renewable energy.
- **Superconducting DC power transmission.** EYP is providing technical assistance to support the analysis of commercial applications of applying superconducting DC power transmission to buildings.
- **Live/Learn.** EYP is conducting systematic evaluations of how its designs impact students and faculty through independent studies of live/learn environments at colleges and universities, as well as energy efficiency, comfort levels, and safety in client buildings.
- **STEM.** Through its STEM initiative, EYP is seeking ways to improve the quality of Science, Technology, Engineering, and Mathematics education, in order to attract more students to these disciplines.