This year is a momentous one for the theatre consultancy Auerbach Pollock Friedlander (and its architectural lighting design studio, Auerbach Glasow), as it turns 45, making it one of the longer-running firms in its field. The firm presents a remarkably youthful face to the world, however, thanks in part to the wide variety of projects in its portfolio, many of which draw on the latest advances in entertainment technology. A look back at the company’s history is a kind of study in miniature of the industry: A firm that started out working mostly on regional theatres and performing arts centers—and, along the way, developed an associated architectural lighting design practice—now has its fingerprints on some of the most complex and high-profile live entertainment projects in the world today. It’s a remarkable tour of the process by which theatrical concepts have found their way in virtually every aspect of society. And, one suspects, there is much more to come.

S. Leonard Auerbach (known as Len), the man behind it all, was perhaps unusually qualified to join the still-pioneering theatre consultant profession when he did. Having earned a BFA in drama from Carnegie Tech (today, Carnegie Mellon University), he stayed on to get an MFA in theatre architecture, working in studio with the school’s architecture and urban design group. Prior to attending Carnegie, he logged in the requisite time in New York: “I did the install for

The team, assembled in the San Francisco office.
Fantasticks [at the Sullivan Street Theatre, where it remained for decades] and hung around, working as house manager; I made $35 a week, and that was just enough to have a room and get some burgers.” He also designed scenery Off Broadway for Equity Library Theatre; at least one production, Detective Story, was a highly successful show-case.

By 1967-68, Auerbach was in Minneapolis, working as resident lighting designer at the Guthrie Theatre, one of the first prominent venues in the then-burgeoning resident theatre world. His job involved much more than the title suggested. “When the Guthrie was built,” he says, “there were funding problems, which they solved by omitting one of the building’s structural bays. This saved approximately $20,000, which was a big deal at the time. Of course, it also cut out most backstage amenities, including access to the stage. The scene shop was in the basement, and the only way to get scenery out was to take the traps out of the stage and haul it up. I had a concept for an addition; I was hired to advise on the design, and also to deal with what hadn’t been done for the building in the first place. I was there for two seasons, designed a studio theatre in a nearby church, and designed lighting and projections for 13 productions in Minneapolis and their St. Paul Seasons.”

Next, Auerbach was approached by acoustician Russell Johnson and theatre consultant Tom DeGaetani about joining the firm Bolt, Beranek and Newman. Auerbach eventually joined up, a move that, for all its prestige, may have proved to be less than satisfying. “BBN got involved with, because the Ford Foundation gave out research grants to study the acoustic viability of divisible classrooms. The Macton Company, which made turntables, developed a way of turning the audience area around, making small classrooms out of it, isolating them from the performance space. I believed that these turntable rooms at the back of the hall were awful; you couldn’t circulate in or out of them and when they were linked up, it wasn’t a unified space. I suggested making a hexagonal shape, in an arena form, and, using a horizontal dual-coil wall system, putting two of them side-by-side: You could have acoustical isolation and you could track them out any way you want. If you retracted one, you got a prosce-nium house. If you retracted two, you got a thrust. With all of them retract-
ed, it became an arena." This anecdote is a telling one, revealing that, at a very early stage of his career, Auerbach was already focused on out-of-the-box problem-solving for highly singular projects.

As promised, Auerbach moved to San Francisco and, after another two years with BBN, set up an office with a colleague, Vince Piacentini. “We had such a collaborative friendship,” Auerbach says, adding that the relationship with BBN became increasingly unsatisfying, so Piacentini/Auerbach was established in 1972. Piacentini suffered from health problems, however, and he returned to BBN before starting a small firm of his own, based in St. Louis. The original firm was rechristened S. Leonard Auerbach and Associates in 1973. An early major project, he says, was Children’s Theatre Company, in Minneapolis. “It was conceived as a significant regional theatre for children,” he said in a 2010 interview with another publication. “It required an intimate and comfortable space with good sightlines for both adults and children in a mixed audience environment. Kenzō Tange, the architect, sought to create a womb-like and intimate interior. We collaborated, designing a 750-seat space with a homogeneous orchestra level and two very shallow balconies to reduce viewing distances and encourage the perception of space, that confirmed Tange’s concept.” He also designed, with Tange, the Minneapolis Institute of Art’s architectural lighting.

**Growing the firm**

As Auerbach notes, the early years required him to be a generalist who could provide the creative and technical design for many disciplines, such as room design, seating and sightlines, lighting systems, rigging, machinery and controls, electrical power, sound systems, building codes, etc. All aspects were provided in analog fashion of hand drawings.
and original application to project specifications. As time went on, the growth of the firm and evolving technologies required specialists in various applications and a consulting structure that managed to maintain the integrated nature of all aspects of the essential technologies with architecture. This brought together many talented staff members, who have been the core of the firm for many decades. Some have moved on in life and followed other pursuits; one example cited by Auerbach is Mike McMackin, who was a part of the firm for 30 years, now resides in Mexico.

One of the most critical additions to the firm in the late 1970s was Holly Auerbach, initially providing part-time support while attending California College of Arts and, upon completing her studies, lending her design talent to many projects in the conceptual phases during the formative years. Later, she became executive director and CFO of the firm, serving in these roles for more than 35 years. The marketing and business structure of her tenure continues as the foundation of the firm's
success, Auerbach notes.

Steve Pollock, now a consulting principal with the firm, says that in the early 1980s, he was living in New York, working as lighting designer in regional theatre and Off Broadway, and also for special events such as the centennial celebration of the Tennis Hall of Fame in Newport, Rhode Island; he supplemented these projects with a day job as technical editor for Theatre Crafts and Lighting Dimensions magazines.

“I was in San Francisco during Thanksgiving, 1984, interviewing Len for a story about the Ordway Music Theater,” Pollock says. The 1,900-seat Ordway Music Theater, in St. Paul, Minnesota, was a major venue of its type in the 1980s. “We had such a good interview that we agreed to meet a few months later, at USITT. Then I decided, with my girlfriend— to whom I’ve now been married 32 years—to move to California. Len said, ‘When you come here, you can start with us.’ I started working for the firm in August 1985. The first project I had a hand in was the Yerba Buena Center for the Arts.” It was a

Santa Fe Opera is a good example of the firm’s work designing outdoor performance spaces.
hometown project, and, again, a significant one. Yerba Buena Center for the Arts, Galleries, and Forum is a multi-use community art exhibit facility in downtown San Francisco; a little more than a decade after opening for business, the firm was working on a broad variety of projects.

Pollock continues, “In our kickoff work session at Polshek and Partners [now Ennead, Yerba Buena’s architects], Len asked me to work with him and, after three days working at drawing tables in Polshek’s office, we laid out theatre plans and sections, all hand-drawn. I remember, after one particular meeting—I was working side-by-side with Len, which was incredible training—he turned to me and said, ‘Whether you know it or not, this project has been going on for 12 years.’ I learned early: This business can humble you.”

Pollock adds that another signifi-
significant project at the time was the Allen Elizabethan Theatre at Oregon Shakespeare Festival. The company has been around since 1935 and the Allen, an outdoor theatre, was its first venue. Pollock and Auerbach worked with the festival’s designer, Richard Hay, with whom Auerbach first collaborated at the Guthrie, designing projections for *The Resistible Rise of Arturo Ui*. They came up with a 1,200-seat, multi-level pavilion designed to meet with the existing historic Elizabethan theatre structure. “We began work on the day the season was struck, and we were ready for opening day of the next season,” Pollock says, recounting a schedule that was daunting in its narrow time frame.

Another project cited by Pollock shows the firm’s ability to manage complex, prestigious projects: The US Capitol Visitor Center, which evolved over the course of two presidential administrations. The firm collaborated with RTKL Associates, the architects, on the organization and layout of the Visitor Center’s two 250-seat orientation theatres and 450-seat Congressional Theatre, designed for joint sessions of Congress and special Library of Congress screenings. It is configured as the Capitol’s primary venue for media-intensive governmental sessions; it has a full wall of rear-projection systems, allowing members of Congress and guests to witness pre-recorded events and real-time live video presentations. It goes without saying that only a highly respected firm would be entrusted with such a sensitive, high-profile project.

**Adding architectural lighting to the mix**

Patricia Glasow, who came onboard before Pollock, represents another side of the Auerbach organization, as she is the firm’s executive vice-president and the principal in charge of Auerbach Glasow, which specializes in architectural lighting design. Trained as a theatre lighting designer, she worked for Strand Century Lighting and had completed a stint with WED Enterprises, working on theatrical and architectural lighting for EPCOT Center and providing field supervision at Disneyland’s Fantasyland, before joining Auerbach in 1984. “I was the first person hired specifically as an architectural lighting designer,” she says. “That was the big step that Len took, in creating an architectural lighting department.”

From the beginning, Glasow worked exclusively on architectural lighting projects, including, early on, the San Jose Convention Center, and the British Columbia pavilion, one of several with which the firm was involved at Expo 86 in Vancouver, British Columbia. She notes, “Len already had contacts with architects, and my job was really about attending to those clients and helping to grow that part of the business.” She adds that the company’s project portfolio was, from the get-go, “pretty broad. I think people are attracted to us because of our specialty component. I tell my clients, ‘If it’s lighting, we do it.’” She adds, laughing, “I don’t know what we don’t do—except for prisons, which is fine with me!”

She isn’t exaggerating. A quick perusal of Auerbach Glasow’s project list includes corporate headquarters, retail venues, churches, theme entertainment, hotels, museums, and edu-

An Auerbach favorite, San Francisco’s SoundBox is a state-of-the-art venue for all types of new music. 

Photo: Stefan Cohen
cational institutions. “One of my recent favorite projects was the Lighthouse for the Blind and Visually Impaired here in San Francisco, which we designed with architects Mark Cavagnero Associates.” she says. “You might wonder why they needed a lighting designer, but over 90% of their clients, and also the people who work there, have some level of vision and perception of light. We worked closely with the executive director, and the committee he put together, demonstrating lighting techniques and doing mock-ups of equipment to understand their level of visual perception. It was a very intimate getting-to-know-your-client experience, but there was no way we could have done it by ourselves. It’s one of the few organizations for the blind that is run by the visually impaired; it includes meeting rooms, reading rooms, lounges, a conference center, and dormitories where people can stay when participating in training.”

The integration of Auerbach Glasgow with Auerbach Pollock Friedlander (APF) is seamless, Glasow adds. “We’re in the same office; we sit next to the theatre staff. Sometimes we’re doing multiple projects together and sometimes not at all. Sometimes, Steve [Pollock] will come to us with a theatre project. Then again, I had a high-tech corporate client who wanted a mechanized, segmented conference table that rose out of the floor. We brought Len in...
Friedlander worked on the sound-reinforcement, playback, and video and communications systems in this flexible space; it also developed a system that isolated the mechanized rigging elements from the main hall directly above. Auerbach Glasow designed the architectural lighting for Zankel Hall, integrating newly developed light pipe technology into the interior wall materials and imbedded sources. This is an excellent example of the New York and San Francisco offices being highly integrated on a single project.

Zankel Hall began a 20-year period in which APF worked on a number of important New York projects, including the Richard B. Fisher Building at Brooklyn Academy of Music, the Drama Division Studio at the Juilliard School, a significant upgrade to the public spaces at The Public Theater, and the Pershing Square Signature Theatre Center, an ambitious, three-theatre venue developed with the architect Frank Gehry. The latter is one of the most vital additions in years to New York’s Theatre District. One of the spaces—the Alice Griffin Jewel Box Theatre—is one of the most perfectly proportioned playhouses in the city.

Along with Steve Friedlander joining the firm, Paul Garrity, an established production sound and systems designer, who previously practiced with Steve Friedlander, also came onboard. “Paul is always at the cutting edge of audio design and has developed highly sophisticated audio and projection systems for many award-winning projects,” Auerbach says. “His talent as a production and sound systems designer was heavily applied to the Zankel project and provided an opportunity to expand this aspect of the firm. His close work with clients, such as Cirque du Soleil, in creating aural experiences in non-conventional environments has had outstanding success.”

Garrity, as principal in charge of the audio-video consulting group, has brought in a team of colleagues over the years that, Auerbach says, is unrivaled. Together with Dan Mei and Ken Fause, the team’s breadth includes sound reinforcement, production sound, multi-dimensional aural planetarium experiences, and broadcast studio design.

New projects, new markets, a new generation

APF has continued to evolve with the industry. Tom Neville, a principal of the firm who runs the small Minneapolis office, was working as production manager at Berkeley Repertory Theatre when the firm collaborated with ELS Architects on the design for BRT’s new Roda Theatre, a project that was completed in 2001. (Auerbach has had a long history with Berkeley Rep, having consulted on its thrust stage in 1980.) By then, Neville was onboard at APF, working as project manager for the Latter-day Saints Conference Center in Salt Lake City. “Due to its scope and size, it was essentially my only project from June 1996 until April 2000,” he says.

This was indeed a massive endeavor, involving the participation of a broad, specialized team, and with Auerbach leading the design. The project consists of a 21,000-seat auditorium, making it one of the world’s largest indoor conference spaces and a 911-seat proscenium theatre. The center is designed to last for 150 years, with an infrastructure that can accommodate the latest technology throughout its lifetime with a framework of data distribution, power, structural systems, an accessible service tunnel network and a high-definition television studio. Zimmer Gunsul Frasca Partnership was the architect of record, Gilles Stransky Brems Smith the consulting architects, and Jaffe Holden the acoustics consultants. Auerbach Glasow was the architectural lighting designer for all the interior and exterior public spaces.

Work on the LDS Conference...
Center led to another exciting project: the Salt Lake Tabernacle for the Church of Jesus Christ of Latter-day Saints. Built in 1867, it was in need of renovation to meet current seismic standards for earthquakes in the Salt Lake City region. Application of 21st-century theatrical systems had to be integrated into the existing building with minimal impact on the historic interior. The building is home to the Mormon Tabernacle Choir, and Music and the Spoken Word, the longest continuously running radio program in the US; it hosts more than 500 events annually. APF was asked to design a flexible infrastructure to accommodate general conferences, stake conferences, a large orchestra, choir, and reduced-sized orchestra performances. FFKR was the architect and Kirkegaard Associates consulted on the acoustics.

APF continues to have a long and successful relationship with Cirque du Soleil in Vegas and abroad. At the behest of MGM Resorts, Len Auerbach was invited to serve as theatre consultant for the Zumanity Theatre at New York New York Hotel and Casino, the success of which led to an ongoing relationship. Each of CDS’ entertainment venues has required dedicated theatre spaces, and the firm has been extremely inventive in designing venues that accommodate each production’s high-production-values requirements. Arguably the most spectacular is the venue for KÀ, at MGM Grand Hotel and Casino. This is the extravaganza with a stage deck that moves in various directions, among other wonders. APF developed criteria and coordinated the theatrical systems infrastructure within the building to achieve independent and reliable operation. Under Neville’s management, this included developing an infrastructure of sophisticated stage machinery and mechanized elements, controlled by a sophisticated automation system. In addition, Garrity designed extensive production-specific sound, video, and production communication systems for the space. (Marnell Corrao Associates was the architect and Perlton Marsh Kinsella the acoustician.)

Far more intimate, but no less challenging, was APF’s work on The Beatles LOVE, the Cirque du Soleil entertainment at MGM Mirage. One of the production’s talking points was the use of newly remastered versions (by Sir George Martin) of classic Beatles recordings. Working with Cirque’s audio staff and Jonathan Deans, the production’s sound designer, APF designed the extensive sound, video, and production communications systems. The challenge of designing a 360° show involved creating hidden arrays; the surround-sound system required the placement of more than 280 primary and surround loudspeakers throughout the auditorium, with more than 2,000 custom personal loudspeakers installed in the audience seating. (In this case, Marnell Corrao was the architect and Jaffe Holden the acoustician.)

Interestingly, however, when asked about his most important projects, Neville cites “the new high school auditoriums, which many school districts have constructed over the years. Watching a high-school student who performed or worked in a ‘gym-auditorium’ move into an actual theatre with all of the best equipment, gives me a great sense of satisfaction and hope.”

**Future thinking**

Neville’s comment about young people is also a reflection of the firm’s intensive engagement with the industry and larger world. Everyone interviewed for this piece belongs to the expected industry associations and many of them are involved in education. Auerbach has taught and/or lectured at Carnegie Mellon, Harvard’s Graduate School of Design, University of California at Berkeley, and various professional organizations. Glasow is a trustee of the Robert Bruce Thompson Student Light Fixture Design Competition and has spoken at panels produced by the Illuminating Engineering Society, American Institute of Architects, and others. Pollock is the former architecture editor of TD&T, published by USITT, and has contributed to many industry publications, including this one. Friedlander serves on the Dean’s Advisory Board of Boston University’s College of Fine Arts, and has lectured at Yale University, for the British Society of Theatre Consultants, and elsewhere. Auerbach is a fellow, past president, and founding member of the American Society of Theatre Consultants.

Also, Auerbach notes, while consulting on Carnegie Mellon’s Purnell Center, he says, “I was poked, by Martin Prekop, then the dean, to donate to the capital campaign. I didn’t want a plaque on one of the rooms, but I wanted to help sponsor a theatre architecture curriculum so my academic experience could be realized by others. This fostered the theatre architecture program, a joint effort between the school of architecture and drama department, that begin in 2001. I was awarded the FitzGibbon Chair in Architecture in 2003 and have been participating with this studio ever since.

“The CMU theatre architecture studio engages upper-class and graduate students from architecture, drama, arts management, and other disciplines in teamed practical projects for active arts organizations in various cities, nationally and internationally. The quality of the student work rivals some of the highest-level professional firms. The program is led by CMU faculty: Dick Block, from drama, and Hal Hayes, from architecture.”

There is much more to the Auerbach Pollock Friedlander/Auerbach Glasow story, not least its ongoing work with universities, major symphony orchestras,
opera companies, regional theatres, popular entertainment venues, intimate community theatres, museums, civic buildings, and commercial entities. Add to that the Belgian staging maestro Franco Dragone, who is currently putting on major spectacles in China and the Middle East. Auerbach says, “The recent advancement of Rob Hill to principal in charge of our Dragone projects in China is a testament to gaining client confidence and building strong relationship on complex international projects.”

Friedlander notes that cruise ships (a market that has been rather dormant in the last few years) are coming back, and APF, which has done many entertainment spaces for Royal Caribbean, is likely to be part of the mix. Neville, asked about upcoming projects, says, “Non-disclosure agreements preclude me from answering this question with any specificity, but I can assure you of one thing: You will always find Auerbach Pollock Friedlander at the razor-sharp intersection between technology and entertainment.”

Auerbach finds it difficult to point out any favorite projects, but points to two recent San Francisco projects: SF SoundBox and SFJAZZ Center. The former is an experimental music performance space, a flexible conversion of a very large rehearsal room at the rear of Davies Symphony Hall, which serves as San Francisco Symphony’s tool for new works. The latter is the first stand-alone structure in the country built for jazz performances, the result of close collaboration with the architect, Mark Cavagnero, and Randall Kline, the founder of SFJAZZ. “It is magic the moment you walk in and the first note is struck,” Auerbach says. “The entire company celebrated its 45th anniversary at a SFJAZZ performance.”

By way of conclusion, Auerbach says, “After 45 years and 2,000-plus projects in 29 countries, 380-plus awards, and creating 200-plus jobs for people, the part that makes you want to come to work each day is the people. Everyone is very special. We are a very diverse and vibrant group, with staff from all over the world with young minds and upcoming talent joining the firm. With respect to our clients, we share our passion for theatre, architecture, lighting, art, and technology with a spirit of enthusiasm and commitment. I wouldn’t give that up for anything!”

KÀ, the Cirque du Soleil extravaganza at MGM Hotel and Casino, is one of many CDS attractions to feature a dedicated theatre designed by APF.
45 years of design excellence that have been possible through the talent and dedication of our people. We celebrate the quality of our clients and colleagues, the diversity of our projects and the team that has produced this work and will continue to provide outstanding service well into the future!