

The background of the entire cover is a dense, overlapping collage of numerous small, rectangular photographs. These photos depict a wide variety of architectural subjects, including modern skyscrapers, historic buildings, bridges, and interior spaces, all in various colors and orientations.

# THE Advisor<sup>TM</sup>

A  PUBLICATION | SUMMER 2016

Bringing Buildings To Life Since 1966<sup>TM</sup>



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## YEARS OF EXCELLENCE

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1966 - 2016





# Welcome

JBA has reached the historical milestone of 50 years in business. As I contemplate JBA's past, present and future, the first thing that comes to mind is gratitude. We have been blessed as an organization and owe tremendous gratitude to our clients and all the great Advisors, past and present, who comprise the JBA global family. Our clients have made it possible for us to work on some of the most challenging and unique projects throughout the world, and our Advisors have always risen to the occasion.

We are now half a century into the adventure Ralph Joeckel started in 1966 and Ed Butera joined in 1974. JBA is now in the 3rd generation of leadership building on Ralph and Ed's foundation. Naturally a good portion of our history has been linked to five decades of tremendous growth in Las Vegas. The past two decades have been the most dynamic for our business—driven by continued growth of Las Vegas, our expansion to Asia on the back of extensive gaming growth in Macau and our geographic expansion into Hong Kong and additional non-gaming U.S. markets of Atlanta, Boston, Los Angeles, New Orleans, New York, Orlando and Phoenix.

Over the past decade, particularly with the economic downturn and the globalization of our clients' businesses, there has been substantial change and growth in our organization. The expansion is not about headcount, but rather about diversification of geographies, sectors and services, and is fueled by an intentional global mindset. Our commitment to Asia, the extended JBA family we have developed there and the great clients who have provided project opportunities, has enabled continued growth in spite of the global economic challenges. We set out to create an agile global business, and we have made great strides.

As we move forward, the questions we face are how do we evolve as a company to keep pace with and stay ahead of the ever-changing business landscape? As the needs of our clients and needs of the industry change, how do we position ourselves to grow as a valued resource in a dynamic business ecosystem? Furthermore, how do we do so without losing the essence of what Ralph and Ed started? One of my favorite quotes from Ralph is, "if you can't be the best, you might as well quit." Quitting is contrary to who we are, so aspiring to be our best is the obvious choice.



What does being the best actually mean? For me it's about aspiring to be excellent in everything I do, and a simple way I articulate it is the JBA DNA. It's not complicated: **Care, Lead and Do Great Work, Always.** This captures the essence of JBA and what it means to be a Trusted Advisor. Everything positive we have achieved over the past 50 years can be tied back to these three simple pillars. Specifically, it boils down to the Advisors who bring the JBA DNA to life and represent the only real asset in our business—human capital.

Over the past 15 years we have really focused on defining who we are as a company, what we stand for and what we aspire to be. We articulate this in our vision, **To be Worldwide Trusted Advisors**, our purpose of, **Improving and Protecting the Human Environment**, our values of Integrity, Commitment, Expertise, Passion, Innovation, Quality, Leadership and Accountability, and the simple reminder of our organization's DNA: **Care, Lead and Do Great Work, Always.** Our focus on these has enabled us to be intentional in building a business that is scalable, sustainable and postured for success in the future. Intentionality in the business we build, the difference we make, and the legacy we leave are key to ensuring we provide the next generation something better than what we started with, something we can all be proud of as we look back on our contribution knowing we have leveraged our gifts, talents and resources to make a better tomorrow for future generations.

As we set out on our next 50 years, let's be mindful of our rich history, grateful for our tremendous achievements and conscious of our responsibility to honor the legacy of Ralph and Ed through the services we provide, culture we create and the great company we take forward. Thank you to Ralph, to Ed, to all our clients and to all past and present Trusted Advisors who have made possible all that JBA has become.

**Dwayne Miller**  
Chairman of the Board

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ENROLLMENT SERVICES





# A More Dynamic Process

*Alternate design process in action in the construction of an innovative new campus for Saint Xavier University*

*Photography by Liam Frederick*



We're all familiar with design/build and design/bid/build processes – but there's a trend toward more fluid design methodologies, such as Construction Manager at Risk (CMAR) and Integrated Project Delivery (IPD). These bring consultants and contractors into the process early, then ask them to work together to meet the owner's criteria in the most cost effective way.

"There are several advantages to an IPD, CMAR or similar process," explains Michael Shafer, Senior Director of Consulting for JBA Consulting Engineers. "The idea is to get the best work out of each player, because each feels he or she has a real influence on the finished product. Subcontractors have a chance to provide a real world perspective before the drawings are finalized. Earlier input can speed up the overall process, so these methods are often used on fast-track projects. Typically they're cost effective as well, finishing at or below budget."

CMAR was applied at the new Saint Xavier University campus in Gilbert, AZ. It was an unusually rapid and innovative project, completed in just 19 months from initial planning to opening.

## **FLEXIBLE AND FUNCTIONAL**

Saint Xavier University, founded in Chicago in 1846, is a mid-sized Catholic university offering degrees in business, education, nursing, and liberal arts and sciences. About three years ago, they connected with the Town of Gilbert and partnered to build a university campus downtown. The decision sparked a reevaluation of teaching methods throughout Saint Xavier.

"We formed a task force, 100% faculty, and challenged them to dream the impossible," says Dr. Chris Zakrzewski, Assistant Provost for Technology and Instructional Innovation.

"What would they want in their classrooms, not in five or 10 years, but in 25 years?" He says they understood that technology today turns over every five to seven years, "but the building itself has to last."

The group was familiar with a growing body of research that stresses the advantages of collaborative, socially interactive teaching methods, and so they pushed for the creation of learning studios, rather than traditional classrooms, on the new campus. "On the other hand, we know that transformative processes take time. We wanted pedagogically flexible spaces that would accommodate the early adopters on our faculty as well as traditional lecturers."

## **COLLABORATIVE TECHNOLOGY THROUGHOUT**

The new campus opened this fall with a single four-story building in downtown Gilbert.



### Capturing More Than Attention

*Throughout the building is a gigabit wireless network at the fingertips of students and staff.*

It includes six general-purpose learning studios designed by Carrie Perrone, AIA, Principal and Project Designer for AE firm SmithGroupJJR and Nathaniel Holland, Senior Project Consultant, Audiovisual, for JBA.

Each studio has shared, wall-mounted 65-75" displays and wall-to-wall whiteboards for multiple groups of students. Two of the studios have fixed tables for groups of up to seven students. Two have smaller, movable tables for groups of various sizes or to be set up for lecture/discussion formats. Two use tables of varying heights, which, when used for lectures, function like traditional tiered classrooms. "Yet professors can still rearrange the room in minutes for collaborative projects," Zakrzewski notes.

Throughout the building is a gigabit wireless network, which gives students the ability to connect to each other and to the Internet with any device—laptops, tablets or phones. "We're no longer living in a plug-in world," explains Holland who designed the network and server room for the new building. In addition, there is a server room and six smaller IT equipment rooms, all connected with a 10 Gigabit fiber optic backbone, ensuring that the building will be ready as data speeds increase.

Also on the network are 70 Christie Brio presentation servers, which add wireless connectivity from the instructor and student systems to the various displays. The Brios provide a simple method for anyone with

network access to send images and sound from any computer, phone or tablet wirelessly to any display or combination of displays.

The third floor includes a full hospital simulation laboratory for the nursing program, with an elaborate video recording and playback system used for debriefing. There's also a learning studio for nursing, dubbed the Immersion Room. At the front is a hospital bed with a patient manikin. A ceiling-mounted camera captures demonstrations and projects them on the monitors wall-mounted around the room.

On the first floor is the General Assembly, a high-ceiling space ideal for student and community events. It includes a three-projector video system, which can show a 40' edgeless, blended image, or two or three side-by-side images. The room itself has a flat floor but includes tiered, retractable seating in the back and movable tables and chairs in the front. "We can seat anywhere from 50 to 230 people, or pull out all of the furniture for receptions or job fairs," Zakrzewski explains.

"At Saint Xavier, it's all about the students, not the instructors or the building," says Shafer. "The university is changing how teaching has been taking place for centuries."

### THE LEARNING COMMONS

"To me, the most unique and interesting feature of the new building is its learning commons," Perrone says. "We created a

lantern at the corner of the building with floor to ceiling windows, putting the education on display. It's very welcoming, warm and respectful of the community."

The commons includes eight collaborative stations where students can work together. Like the new learning studios, each has a 55" flat panel, and students can connect to it or to each others' devices using the wireless network. Here, each display is embedded behind a large glass surface, where students can stand up and write notes or create diagrams as they work together on a project.

"In a lot of academic buildings, the key is efficiency, to get students in and out quickly," Shafer explains. "Not here. Throughout the building, Saint Xavier is providing a place where students can linger, interact and learn from each other as well as from their instructors."

A striking feature of the learning commons is a unique, 20' wide "mosaic video wall." The concept was created by Saint Xavier then implemented and detailed by Perrone and Holland. It's made up of 19 angled displays, visible from outside the building as well as inside. "We did not purchase artwork for Gilbert," Zakrzewski says. "Instead the video wall is part of a rotating gallery space showing the work of local artists, many from the high schools and community college. It's a way to pull the town into the institution, giving them a reason to visit us."

## Keeping Current

*Communicating the latest news is easier with a network of monitors campus-wide.*



## A FLUID DESIGN PROCESS

One of the biggest challenges in creating this innovative building was the project timeframe. The team spent 10 months in design and 12 in construction, compressed to just 19 months by finalizing the last designs after the building broke ground. The speed of the process allowed the new school to open in 2015.

“Too often technology is an afterthought,” Zakrzewski says, “but we knew it would be a critical component of this building. We needed JBA on board very early to help create our technology vision, make sure the building would handle it and that everything would fit within our budget.”

Katie Stachler, NCARB, Principal and Project Manager at SmithGroupJJR, says at Saint Xavier there were two design packages, one for the core and shell of the building and one for the interior and the internal systems. By and large vendor selection was done in just two steps.

“The CMAR, Okland Construction, was hired shortly after we were,” Stachler says. “They attended all of the design meetings and gave us real time cost estimates for the different design elements.”

One place where CMAR helped immediately was in the exterior. The architects originally favored metal panels with punched window frames, but subcontractor KT Fabrications suggested a unitized skin, which they were able to create in advance then hang as the structure went up. “That was a good illustration of the power of our process,” Stachler says. “We saved costs and, with the prefabricated panels, construction moved a lot faster. It would not have been possible had we committed to an exterior design then put it out to bid.”

Holland says, for technology, “We worked out our basic designs then created only limited bid documents –a programming report and infrastructure layout, plus some narratives of what we wanted to accomplish.” The team chose Level 3 Audiovisual of Mesa, AZ as the AV integrator. “Once they were on board, we worked hand in hand,” he adds.

While Level Three Audiovisual was hired after JBA completed the initial designs, Holland says “They were involved early enough to circumvent any conflicts, either getting on board with what we planned or suggesting alternates before the drawings were finalized. In that way, we were able to avoid delays and any possibility of change orders.”

“Theoretically in Construction Manager at Risk,” Stachler adds, “there will be no change orders at all unless the owner changes the scope. If we miss showing some conduit, then the subcontractor should have been involved to include it.”

Whether CMAR makes the process easier depends on who you ask. Holland, in charge of the data infrastructure, says “If we have everyone in the room early on, it’s so much easier to get the drawings, write the specifications they will need and get it all coordinated.” Perrone adds that “There were more people at the table, so it was more complicated, and sometimes it was pretty intense.”

Still, she says it was the only way they could have delivered the project this quickly. “There was no time for construction mistakes or time to debate on the systems used. The subs all had to be at the table.”

In the end, the project was delivered on time and under budget, and the building is beautiful. “Everyone who walks in is amazed,” says Zakrzewski. “The technology is fantastic. If I could start over on our campus in Chicago, I’d build something similar to what we have in Gilbert.” ♦





# FINDING THEIR WAY

## LOCATION-BASED MOBILE TECHNOLOGY IS POISED TO REVOLUTIONIZE SERVICE OFFERINGS IN HOTELS, GAMING, MUSEUMS, THEME PARKS AND AIRPORTS, AS WELL AS RETAIL

The last three years have seen a quiet, but remarkable change in the technology available to reach out to clients. Since June 2013, both Apple and Google have released software protocols allowing mobile phones to receive signals from Bluetooth® Smart “beacons” to pinpoint clients within a facility. Wi-Fi technology, too, can locate users precisely. More and more organizations are using both to improve service to clients who are inside their facilities.

In retail, Target, Macy’s, Walmart, Walgreens and others are experimenting with ways to use beacon and Wi-Fi-based location data to send consumers timely promotions and to turn “showrooming,” the practice of shopping online while already in a store, to the store’s advantage.

At the same time hotels, casinos, theme parks, museums and airports are beginning to use locationing to improve service to their clients while simultaneously increasing sales.

The possibilities of location-based marketing are very broad, limited only by the application developer’s imagination. A large retailer, for example, might use beacons to detect when a potential customer is standing next to a product display, then use Wi-Fi to send a customized offer on that product. A hotel, on the other hand, may use either technology to detect when guests arrive, then send a message, via its app, on how they can skip the registration line and go right to their rooms. The potential to improve service while enhancing revenue can be huge.

Many experts argue that an even larger advantage is the technology’s potential for data collection. In an effort to improve its fans’ experience, for example, Major League Baseball has installed beacons in several stadiums to track which concessions, shops and sponsor events are most popular. Some hotels are using beacons to understand how public areas such as lobbies and fitness centers are used, while museums can gauge the popularity of individual exhibits.

JBA has designed systems for major gaming and resort properties that utilize locationing, and we continue to evolve our engineering methods to maximize the benefits of this and other new technologies.

# OPTIMIZING THE GUEST EXPERIENCE

Hotels across the globe are embracing mobile engagement as the key to greater guest satisfaction and increased revenues. With Zebra's MPact Platform for Mobile Marketing, you can leverage rich location information to take engagement to new levels of personalization.



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ANALYTICS

GAIN **REAL-TIME** INSIGHTS INTO GUEST LOCATION AND BEHAVIORAL TRENDS.

TODAY'S GUESTS

**40% ↑**



AVG. CUSTOMER/DAY

**440**



LAST 30 DAYS

TODAY'S NEW CUSTOMERS

**42% ↑**

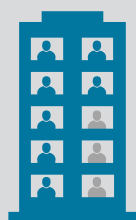


AVG. ENGAGEMENT/DAY



GUEST ENGAGEMENT

TODAY'S CUSTOMERS: **186**  
WEEKLY CUSTOMERS: **1,125**



**70%**

OF GUESTS ARE **HAPPY TO SHARE THEIR LOCATION** IN EXCHANGE FOR GIVEAWAYS, DISCOUNTS AND IMPROVED SERVICE<sup>1</sup>



**59%**

OF PEOPLE WOULD BE MORE LIKELY TO JOIN A LOYALTY PROGRAM THAT OFFERS A SMARTPHONE APP<sup>2</sup>



**84%**

OF GUESTS WANT HOTELS TO USE **LOCATIONING DATA** TO IMPROVE THEIR CUSTOMER EXPERIENCE<sup>3</sup>

**ZEBRA'S MPACT PLATFORM FOR MOBILE MARKETING**  
THE NEW RULES OF IMPACTFUL GUEST ENGAGEMENT

<sup>1</sup> Survey from ClickFox, as cited in <http://blog.htp.org/driving-hotel-traffic-brand-loyalty-with-location-based-services/#more-2850>

<sup>2</sup> HT Magazine, (2014, August 6) "2014 Customer Engagement Technology Study"[Article]. Retrieved from <http://hospitalitytechnology.edgl.com/reports/2014-Customer-Engagement-Technology-Study94392>

<sup>3</sup> Graham, C. (2014, July 23). "Study: Why Customers Participate in Loyalty Programs" Retrieved from <http://technologyadvice.com/gamification/blog/why-customers-participate-loyalty-programs/>



as little as \$25 each. Not only are beacons inexpensive, but the low-energy use of BLE has little effect on users' cell phone batteries, so adding beacons to an existing network has little or no downside.

Daran Hermans, Senior Product Manager at Zebra Technologies, suggests that Wi-Fi may be the best option for wayfinding and other applications where you need to pinpoint a client's exact location: whether, for example, he or she is standing in the entrance to your coffee shop. But if you want to know if the guest is at table #1, 2 or 3, you can learn that using beacons, even if you're not sure exactly where the tables have been set up.

In Hermans' view, the most tech-savvy organizations will use both Wi-Fi and beacons in a mixed-network approach. "Because guests may have only one technology enabled when they enter your property, it can be very helpful for you to use both," he says. "Wi-Fi alone can provide wayfinding and some data collection, even if guests have not downloaded your mobile app or turned on Bluetooth," he explains. Once they download your app, installation can enable either or both radios, give you permission to push notifications to the guests, and allow additional data collection. If they have the app and join your loyalty program, now you have the opportunity to use guests' usage or purchase history to drive additional sales and services.

## LOCATIONING TECHNOLOGY

Location-based technology, in the form of GPS and RFID (radio-frequency identification), has been in use for several years, yet newer technologies offer several crucial advantages.

Wi-Fi, while requiring a relatively high infrastructure investment, is already in place in most hotels, resorts and many restaurants. Big box retailers, including Target and Walmart, have been providing free Wi-Fi to shoppers for at least three years. "Wi-Fi, used on its own, can locate a guest very precisely, as long as he or she is in simultaneous communication with at least three access points," says Jeremy Barndt, Senior Technology Consultant for JBA Consulting Engineers. Providing that much coverage may mean an upgrade for many properties, but it may be a sensible investment in and of itself, given how highly guests value their ability to read email, surf the web, and watch online entertainment services.

Bluetooth Smart, also known as Bluetooth Low Energy or BLE, is a relatively inexpensive technology, given that it can be used on its own with a limited number of beacons costing

Barndt cautions that the line between helping the guest and intruding on his or her privacy has yet to be clearly defined. "I have had the discussion with several clients who have said, 'We want to do this, but we're not sure how to do it without upsetting some guests.'"

Hermans answers that "timely offers are not considered intrusive. As long as what you're providing is relevant to the guests, provides tangible benefits or better service, they will be happy to use your system."

## APPLICATIONS IN HOTELS

A number of large hotel chains have moved forward with locationing technology.

Starwood Hotels is now using Wi-Fi in about 150 of their 1270 properties (most branded as Sheraton or Westin Hotels), to provide faster check in, for keyless entry, and to let housekeeping know when guests are in or out of their room.

Hilton Hotels and Resorts is in the process of deploying mobile-key technology and digital



## Making Business Smarter

*Zebra Technologies offers visionary solutions for enterprises looking for a competitive edge.*

check-in across the majority of its brands. Marriott is piloting a program of mobile-delivered offers based on the guest's location on a property.

"There's a tremendous opportunity for hotels and resorts to improve service and to increase discretionary spending," Hermans says.

"Guests may need extra towels or their TV may not work. You can assign that problem immediately to the closest staff member—and make your service a cut above competitors. You might also use loyalty program data to learn what individual guests like to order from your restaurants – then send them offers on those items if they're on property before dinner."

Locationing also offers the hotel an opportunity to understand what guests most use and enjoy, and in doing so, help optimize their facilities and further enhance revenue.

### APPLICATIONS IN GAMING

In gaming, at least one major company – Caesars Entertainment– is already using its Wi-Fi networks to provide location-specific maps and directions, and is now experimenting with BLE beacons to offer guests promotions and special services.

"One of the biggest frustrations at any casino is knowing that, when a concert or show lets out, a large portion of the audience will head right for the valet," Hermans says. "One way to keep them on property might be to offer a free drink or free poker chips, just as they're leaving the theater."

Dave Wells, JBA's Director of Technology, suggests locationing could help guests broaden their gaming experience. "A lot of people are intimidated by table games. Imagine sending notifications to guests as they walk through the gaming floor, offering them instructions and tips on blackjack, roulette, or whatever game they are near."

Hermans says usage data is at least as valuable to the casino as to the hotel. "In gaming, you have to understand the difference between being present in a casino and being engaged with a machine or table game. We now have the opportunity to see how long different client segments will be on property, and where and how long they become engaged with the environment."

### APPLICATIONS IN THEME PARKS

The number one problem theme parks face, according to Barndt, is guests' impatience



### The Technology of Hospitality & Entertainment

*Caesars Entertainment uses location-specific maps and directions to assist guests.*

when queuing for rides. One solution is to use locationing to reduce the time people have to wait. In doing so operators can free guests up for other activities and help them accommodate more guests throughout the park. Disney's FastPass+, for example, uses a combination of online and mobile apps to allow guests to reserve a start time for a limited number of rides and shows. Their RFID-based MagicBand speeds up admission as well. The company is savvy enough to use these technologies throughout each property. MagicBand also works as a room key at Disney Resorts and can be used to charge meals and services in the parks to the guests' hotel room.

As good as these systems are, they cannot totally eliminate lines. "One of our clients," Barndt adds, "is planning a fast-pass type of system, but in addition will give guests games to play via Wi-Fi, to help make that downtime more interesting. We're working now on that implementation."

### APPLICATIONS IN MUSEUMS

A number of museums have been using locationing, whether based on Wi-Fi, beacons, or RFID, to transmit tour information about exhibits. Rob Pourciau, Director of JBA Artistic Engineering, says RFID has the largest installed base, as it can be read with various devices, including most smart phones.

Still, any of these technologies can allow guests to walk through exhibits in any order and find additional information, whether in audio, video, text or graphic form.

For example, in the Rubens Art Museum in Antwerp, guests can use their smart phones to listen to audio-based explanations of paintings, but also view x-ray scans and zoom in on under-surface details. Some museums have set up games for children to play as they tour, while others are experimenting with beacon-based admissions, recognizing and admitting members without the need to show a pass or even take out their phones.



*JBA can help you create or upgrade your mobile app and the server software backend needed to support it.*

### APPLICATIONS IN AIRPORTS

Beacon and Wi-Fi based locationing is finding its way into a number of international airports, often through individual airlines.

Virgin Atlantic, for example, has begun a trial at Heathrow Airport on improving the customer experience, helping clients find shorter lines, access electronic boarding passes more easily and find the nearest currency exchange.

Japan Airlines is experimenting with better deployment of its ground staff to improve service at Haneda Airport in Tokyo.

In Dallas, American Airlines is testing a new app that uses customer locations to help them find their gates, the best way to get there and the closest security lines.

### HOW JBA CAN HELP

With nearly two thirds of adult Americans now owning smart phones, it's a great time to seize the opportunities offered by locationing technology.

JBA can help in several ways, first by evaluating your current systems, checking to see if your network is robust enough to

satisfy your guests and to take advantage of Bluetooth beacons, Wi-Fi and other types of locationing technology, including RFID and GPS.

We can provide a master plan for any needed upgrades, an Opinion of Probable Cost, and a complete systems design, including detailed design drawings. We can help you bid the job and, if you wish, continue to work as your representative, making sure your contractor does the installation as specified and that the upgraded network performs as planned.

In addition, though our long-term partnerships with software developers, JBA can help you create or upgrade your mobile app and the server software backend needed to support it.

"There's a perception among many that locationing is very expensive, something only a five-star property could afford," Barndt says. "Yet the reality is, if you can afford to develop an app, you can afford this. It's something any forward-looking, service-based organization should consider." ❖



## CONGRATULATIONS!

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FOR THEIR 50 YEARS OF EXCELLENCE!



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FOR 50 YEARS



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ON THIS MILESTONE ANNIVERSARY  
FROM OUR TEAM TO YOURS

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## Singapore Supermarket Chain Revisits Its Energy Consumption to Boost Competitiveness

# Cold Storage Supermarkets

## Cooling Market for Warmer Profits

Just how cold is cold enough? A seemingly trivial question to the rest of us, it is top-of-mind for supermarket executives. Raise the temperature, and you risk ending up with spoiled produce. Lower it, and your energy bill goes through the roof. How do you strike a balance? Determined to find the answer to this multi-million dollar question, the supermarket giant Cold Storage contacted Energenz.

Owned by Dairy Farm International, Cold Storage is the second-largest supermarket chain in Singapore. More than a century old, the company operates stores in 58 locations. Recognized by SGS for quality and integrity in food safety, Cold Storage is committed to delivering the freshest, most exclusive products to its consumers.

Optimizing budget by cutting food costs was always out of the question for Cold Storage. You don't earn the prestigious CaseTrust mark (recognition of a high degree of consumer confidence) by doing that. Overhead expenses, on the other hand, were up for discussion. With refrigeration consuming the most energy and hence money, the supermarket chain was interested in exploring ways to improve its bottom line.



**Brrrrrrr**

*Finding a fast solution  
to reduce energy waste is  
critical for the food industry.*



## Strategic Moves

*The Energenz plan was designed to help Cold Storage reduce their annual energy consumption by 11%.*

"We wanted to conduct an audit of our energy usage. Referred to Energenz by our parent company, we were interested in hearing what their team had to say. We knew that they have experience in working with retail clients. We felt more comfortable collaborating with a provider that understood our needs," explains Cold Storage's Property and Projects Director, Frances Chang.

Tasked with such a massive undertaking, the Energenz team proceeded to develop an energy baseline of Cold Storage's locations based on size, age and energy consumption levels. As a result, store types were formulated and their usage trends identified. Following this approach allowed Energenz to focus on specific aspects of a sample of stores operations and equipment that required in-depth analyses. Knowing what to look for, the Energenz team took to the supermarkets.

"We supplied Energenz with hard-copy reports and made our stores available for on-site evaluations. Energenz engineers interacted with store's operators, asked detailed questions and examined our premises in a meticulous fashion. I feel they've done a very thorough job at the research stage," says Frances.

Three locations representative of different store types were assessed to produce a checklist containing energy saving opportunities. A more general assessment of seven additional stores was conducted to verify previous findings

and ensure feasibility of energy saving measures across the Cold Storage's portfolio. A comprehensive solutions plan was drafted with savings strategies ranging from equipment design and replacement to operational practices and procedures.

"Energenz has provided us with a blueprint for running our current and future stores in an energy efficient way. They've equipped us with a learning platform for store renovations and new projects. Their recommendations are specifically tailored to the needs of each individual store. Their solutions are complete, practical and applicable."

"Throughout the project they've been open to discussion and feedback. Overall, I am very satisfied with their work. They have the necessary experience and are focused on getting things done. They are detail-oriented and very professional."

The Energenz plan would allow Cold Storage to realize over USD \$969,000 in energy savings yearly. If realized, it would reduce the company's annual energy consumption by 11%. The document features strategies with payback periods under two years to ensure rapid return on investment (ROI) on proposed equipment upgrades. It contains energy saving measures that are easy to deploy and incorporates all aspects of energy usage including lighting, HVAC and refrigeration. By 'cooling' its costs, Cold Storage is about to 'warm up' its profits. ♦





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Foundation for Blind Children

**Congratulations to JBA**  
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and to a Continuing Partnership.

**SMITHGROUP JJR**



Arizona State University Psychology Building Renovation

# 1960s



We most remember the '60s as the decade of freedom and love, from the music of the Beatles to the Civil Rights Act. It was a decade of huge engineering feats as well, helping make dreams of a better life possible. There was the invention of the laser, the cardiac pacemaker, the landing on the moon, and the creation of ARPAnet, the research network that became the Internet.



During these eventful times, Ralph Joeckel had a dream, too, of taking the competitive drive and dedication to excellence he learned at UCLA Basketball to a new kind of engineering firm. In 1966, he founded the company that became JBA and, by the end of the decade, helped establish it with major projects at the Desert Inn, Stardust, and Caesars Palace.



JBA's first hospitality project.



Neil Armstrong's first step on the moon is the result of incredible innovation, engineering and teamwork.

# 1970s

In the '70s we saw the end of the Vietnam war, the first Earth Day and renewed relations with China, while women worked for equality. Muhammad Ali knocked out George Foreman, and rock, country, punk, disco, and funk fought for the ears of Americans, who listened for the first time ever on a personal music device, the Sony Walkman.

The decade saw the invention of personal computers, the jumbo jet, the cell phone, digital camera, CD player, CT scanner, Cray supercomputer, and the first video games.



Named after Seymour Cray, the first Cray supercomputer was installed in 1972, and cost \$8.8 million dollars.

Ralph Joeckel renamed his firm JBA Consulting Engineers, and its engineers were key in the creation of the first hotel tower at Circus Circus, a 22-story tower at the Tropicana, and Las Vegas City Hall. JBA took on its first major auditorium, the 7,500-seat Aladdin Theatre of Performing Arts, which today is the AXIS at Planet Hollywood.



JBA assists Circus Circus with an expansion that includes their first 400-room, 15 floor hotel tower.



(above) JBA builds on their success with the development of Las Vegas' City Hall.  
(below) JBA's contribution to the Aladdin Theatre of Performing Arts gets a standing ovation.





Just like Coke, JBA's expertise proves to be the real thing.



JBA assists the Tropicana break ground on a 22-story tower.

## 1980s



Many Americans remember the '80s as a decade of personal growth and prosperity, one of the longest stretches of economic growth since World War II.

The decade saw cable

TV become the standard in most households, while VCRs, big hair, MTV, Pac Man and the birth of Hip Hop all made their mark.



The '80s saw the launch of the IBM PC, the Mac and the first space shuttle. Air Jordan flew – while the Berlin Wall fell.



The Mirage, the worlds first casino megaresort, opened on the Las Vegas Strip, with mechanical, electrical and plumbing designs by JBA. The firm authored among the first high-rise life safety reports in Southern Nevada, finished major projects at the Frontier, the Sahara, and the Desert Inn, and expanded nationally with an office in Southern California and multiple projects for Long Beach Memorial Medical Center and several other hospitals.



Desert Inn returns to JBA for growth assistance.



JBA's technical expertise helps the Frontier alter the Vegas skyline.



(above) Commanded by Astronaut John Young, Space Shuttle Columbia, was launched into orbit. (below) MTV debuts with The Buggles' "Video Killed The Radio Star," forever changing the music industry.



# 1990s

Peace broke out worldwide as the '90s saw the Cold War end and Nelson Mandela freed. America could focus new resources on medicine and technology.



This was the decade of the Internet, when the web browser and new email clients brought the Information Age to everyone. We saw, too, the Game Boy, the DVD, the Hubble Telescope, Seinfeld, Friends, and America's Funniest Home Videos.

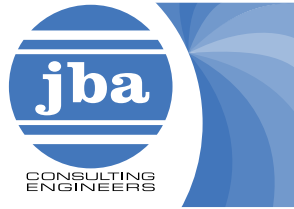


*Orbiting the Earth once every 97 minutes at a speed of five miles per second, NASA's Hubble Space Telescope captures the true artistry of the Milky Way.*



*Steve Wynn opens The Bellagio, quickly becoming the most awe-inspiring, luxurious resort in Vegas.*

JBA did the bulk of the engineering for the Rio, Paris, the Treasure Island, New York New York, the Bellagio, and the Mandalay Bay Resort — and expanded its acoustical and fire protection offerings, becoming one of the first to engineer and deploy a smoke control system under the 1994 Uniform Building Code, for the New York, New York Hotel and Casino.



*The luxurious 43-story, \$950 million dollar Mandalay Bay opens with tremendous fanfare and success.*

# 2000s

While America moved forward to meet new threats and new conflicts, the 2000s saw the human genome mapped, the invention of Facebook, YouTube and Twitter, and the widespread adoption of cloud computing.



Apple introduced the iPod and iPhone, robotic surgery became commonplace, and Skype brought international calling and video communication to everyone.

JBA was instrumental in the opening of the MGM Grand Mansions, the Palms, the Wynn, Mandalay Bay Arena, Mirage Convention Center, Red Rock Casino Resort, Rio Convention Center, Marriott Grand Chateau, Hilton Grand Vacations Timeshares, MGM Signature Towers, Mandalay Bay Convention Center and Caesars Octavius Tower. The firm established separate fire protection and technology departments, continued its long-term relationship with Cirque du Soleil and completed major international projects for the Qatar Convention Center, the City of Dreams Macau, Wynn Macau and the MGM Macau.





*City of Dreams Macau's operational success is the result of great collaboration with JBA's Trusted Advisors™.*



*(above) Caesars' masterfully-planned Octavius Tower is the result of JBA's expertise.  
(below) At a cost of \$2.7 billion, Wynn Las Vegas is at the forefront of luxury, entertainment and innovation.*



# 2010s

In the 2010s, the pace of innovation accelerated, putting remarkable new technology into our everyday lives.



**YEARS OF EXCELLENCE**  
1966-2016

highways, Nasa's \$2.5B robotic spacecraft, Curiosity Rover, successfully lands on Mars, and skyscrapers grew to 160 stories and beyond. Meanwhile, the first human organs were grown in a lab, while new treatments for cancer extended our lives.

JBA launched Artistic Engineering and greatly expanded its worldwide presence in technology, fire and safety, acoustics, and energy management consulting. At the same time, JBA expanded geographically, opening new offices in Atlanta, Boston, Ho Chi Minh City, Hong Kong, Los Angeles, Macau, New Orleans, New York, Orlando, Phoenix, and Shanghai.

Celebrating 50 years of service since 1966 is JBA's most successful accomplishment of the decade.



*JBA plays an instrumental role in the major renovation at the LINQ Hotel & Casino, in Vegas.*

Even as we recovered from the Great Recession, more than 2/3 of Americans bought smart phones, the first self-driving cars hit the



*JBA has been providing ongoing services at MGM's World-Class Resort in Cotai since 2013.*



*JBA helped Las Vegas' new City Hall reduce annual energy costs by \$500,000.*



*JBA's electrical and fire protection teams designed systems for the new SLS Las Vegas; the largest strip project in 2014.*



*Curiosity Rover, NASA's \$2.5B Robotic Spacecraft, successfully lands on Mars.*





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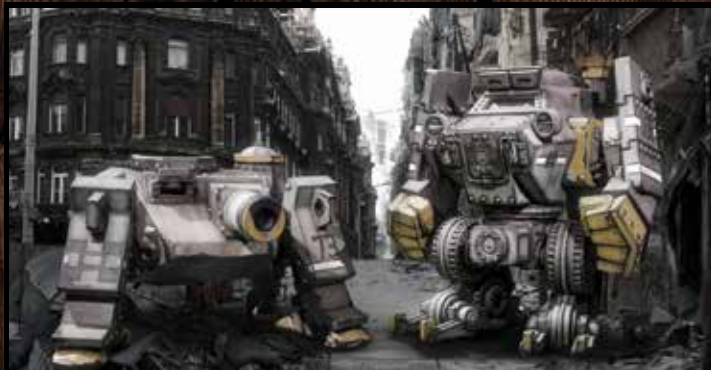
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**YEARS OF EXCELLENCE**  
1966 - 2016



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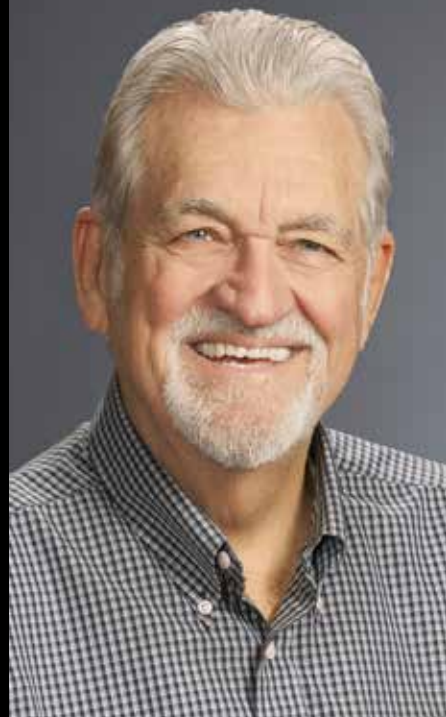
As JBA celebrates its 50th Anniversary, we want to showcase our Trusted Advisors who had the foresight and focus to keep JBA going year after year, and spotlight our next generation of forward thinkers who will diversify and lead us well into the next 50 years.

**RALPH JOECKEL / Founder**ADVISOR SINCE **1966**

During Ralph Joeckel's senior year at UCLA, he played basketball on legendary coach John Wooden's first team. Aided by Ralph's buzzer-beating shot in a key game, they went on to win UCLA's first trip to the NCAA Tournament. What he learned on the court about the drive to excellence helped immensely when, in 1966, Ralph founded the engineering firm that became JBA.

Three factors, he says, led to the success of the company: 1) the unique opportunity afforded by the growth of Las Vegas; 2) a willingness and ability to meet the fast pace of design demanded by the gaming industry; and 3) extremely high standards that set the company apart.

A focus on his employees made all of this possible. "We treated each other like the friends we always were, and we shared the income produced by our fees," Ralph explains. And while they worked very hard, they respected the fact that they all had families and lives outside the office. (Ralph himself has five grown children.) In this way, "We were able to maintain a core of great people better than anyone else."

**EDWARD BUTERA / Chairman Emeritus**ADVISOR SINCE **1974**

When Ralph hired Ed Butera in 1974, he says it was the best thing he ever did. Ed set an even higher standard for fast, accurate engineering and dedication to clients. Ed started his career at IBM and Trane, but he was impressed with the work JBA was doing and with the fact that "you could go out and touch what you were working on, see it being built."

Ed soon became JBA's principal mechanical engineer and principal in charge of any number of complex projects, but he found time to teach at UNLV, the State of Nevada Public Works Board and the American Institute of Architects, volunteer with numerous industry groups, and serve on the Nevada Fire Retrofit Board. "He's an incredible engineer, one of the best in the country," says JBA's Dwayne Miller. "His passion for the work has always been infectious, instilling confidence in our clients and dedication in our staff."

Ed likes to tell people, "I never worked a day in my life, because it's not working if it's what you love." That said, he has always striven for perfection, designing test beds for some of the firm's more unusual designs. "I remember when Steve Wynn said, 'We're going to build a volcano on the Strip.' I said, 'We're going to do what?' but we found a way to do it."

**DWAYNE MILLER / Chairman of the Board**ADVISOR SINCE **1992**

Every small company reaches a point when it must evolve if it is to continue to grow. It was Dwayne Miller whose vision was instrumental in transforming JBA into a global company, with a mastery of modern business practices.

Growing up in a military family, Dwayne had far more exposure to other cultures than most Americans, spending more than half his childhood overseas. He studied electrical engineering at the Virginia Military Institute, then put what he learned to work in the Air Force.

Back in civilian life, Dwayne went to work for Ed Butera, left to head a new office for another, smaller firm, then returned after four years. "I'm an entrepreneur by birth and an engineer by education, so I spent my time learning both the engineering and all aspects of the business," he recalls. Back at JBA, he rose from electrical engineering department head to CEO, in the process moving the company into technology consulting and opening its first offices overseas. "JBA ran like a team of Navy SEALs, a great thing for a small company but not for a large. I was trying to establish more structure, geographical reach and diversity of services, and in the process create a more sustainable, scalable business rooted in a great company culture."

Outside of work, Dwayne enjoys time with his wife, three children, and helping out at his parish, which he describes as an extended family. "I'm a man of faith and I believe in a better tomorrow," he says. "I also believe we have the obligation and ability to make the better tomorrow a reality for the future generations who will inherit the legacy we leave. That's the way I'm wired."





## GEORGE WARA / Senior Project Manager - Plumbing

ADVISOR SINCE **1968**

When George Wara started working for Ralph Joeckel, he was an accomplished musician and composer, but not an engineer. Coming from a family of professional plumbers, he had a knowledge of the trade but no formal training in design. "Ralph worked with me and provided an opportunity to grow to my potential in this field."

Then as now, Trusted Advisors could put in some long hours, and George remembers more than once staying all night to finish a job. He grew in knowledge until he became the lead plumbing designer and manager on most JBA projects and has personally worked on the majority of casino resorts on the Strip. "I always had the choice to take a shot with my music, but I remained at JBA because I enjoyed and learned from the people I worked with and the engineering we did."

Today George spends his summers in Solana Beach, California with his wife of 38 years, but when he does, he works out of the JBA Orange County office. "Shelli keeps telling me I can retire, but I still feel as good about working at JBA as I did when I started."



## HOWARD POE / Senior Project Manager

ADVISOR SINCE **1969**

Like George Wara, Howard Poe knew little about building system design when he started with JBA, but he was an accomplished draftsman and grew into an expert mechanical designer. "The more I learned, the better I liked my job, and I always loved the challenge of a new project." Howard worked on dozens of major resorts, including the Rio, Palms and Wynn Las Vegas, but his favorite was the Bellagio. "That was the first large hotel where I had a major impact on the design."

The projects were demanding, but that was a big part of the fun. "We were a happy family, but everyone understood the work had to be done, and we knuckled down and did it well."



## DAVE MAGDEFRAU / Project Director - Electrical

ADVISOR SINCE **1991**

An avid outdoorsman with a second home in North Dakota, Dave Magdefrau says it's the pace and challenge of complex projects that has kept him at JBA. Dave has worked on a large number of casino resorts, healthcare facilities, and entertainment venues, including several Cirque du Soleil theaters.

Among his favorite assignments were the New York New York and Mandalay Bay Resorts. "They were both high-energy, design-build projects, where we worked closely with the contractors...During those years we accomplished a lot with a small number of people, but we were all good friends and that made the time go by quickly."

# ENGINEERING THE FUTURE



## JIM GIST / Chief Executive Officer

ADVISOR SINCE **2011**

Building on the remarkable achievements of Ralph, Ed and Dwayne, Jim Gist is focused on growing the business by positioning jba as a leader globally, transforming the once North American consulting company into a multi-nation top ranked engineering firm.

Jim has been involved with technology, sales and marketing since an early age. He started programming computers at seven. At 18, he joined the sales team at Circuit City and soon rose to store manager. By 25 he owned his own integration firm, and within a few more years became a vice president at electronics manufacturer AMX. He helped launch Control4 before he was 40 and contributed the technology that went into its unique user interface. He headed the effort to move it into the hospitality market and designed what is still the largest wireless automation system in the world, at City Center in Las Vegas.

Jim joined JBA because "I saw a company with a huge competitive advantage in being willing to think differently. In many ways it's still a 50 year old startup, but one constantly reborn from a history of great work. I saw a collective energy and culture that could create an unstoppable momentum."

Jim says he was incredibly lucky to learn and grow through a series of great opportunities. "Somehow the dots all connected. My goal now is to help others learn their own strengths and learn how they can help us build our company."



## RICK REYBURN / Executive Director of Electrical

ADVISOR SINCE **2011**

A father of three and an electrical engineer licensed in 31 states, Rick Reyburn has more than 30 years in the industry, including 13 at his own firm. Like Dwayne, he started his career at JBA and left, but then returned after a number of years.

Rick, an early student of computer science, introduced JBA to computer aided design back in the 1980s. Since his return, he has led the electrical team for major projects, including the LINQ and the SLS Las Vegas, but he spends most of his time as a manager and mentor of younger engineers.

"When I had my own firm, I was never able to grow beyond 21 employees. It was a question of my management style, where I was making all the important decisions," he says. "Yet in talking to Dwayne about coming back, I could see he was setting up JBA to grow, and to grow large. Today we have about 185 employees, but we have the structure in place to grow easily to 500 or more. It's an exciting place to be."



“To be in business for 50 years is really a remarkable feat and a tribute to Ralph, Ed and Dwayne...”

**Carl Von Hake**

“We have some employees that have been here for 20 and 30 years. That’s impressive. You don’t see that in many companies nowadays.”

**David Wells**



## ENGINEERING THE FUTURE

ADVISOR SINCE **2007**

**ALLYN VAUGHN** / President

When Dwayne hired Allyn Vaughn in 2007, he was looking for someone not only to head the fire protection division but to help guide the company into a position of global leadership. With more than 20 years as a manager and vice president at one of the nation’s leading fire protection firms, Allyn was well qualified to do both.

“I was hired to help guide JBA through what turned out to be a cultural shift, taking it from an engineering company run by engineers to an engineering business.” In doing so, Allyn worked alongside new finance, marketing, and operations specialists, and he helped put a system in place where managers would be trusted to set the direction for each of the company’s divisions. “Looking back at my career, I’m most proud that I was able to help make that transition happen at JBA.”

Beyond his professional life, Allyn is a cook, a woodworker, and an outdoorsman with a cabin near Yosemite. “We all grew up backpacking in the Sierras and I still love going out there with my family.”

ADVISOR SINCE **2009**

**CARL VON HAKE** / Chief Financial Officer

Though a CPA with more than 27 years in financial management, Carl von Hake says he never wanted to be an accountant. “I studied accounting to learn how businesses run.”

After an early career as a CPA and assistant controller, Carl managed golf courses at a number of Las Vegas resorts. He became a chief financial officer first at a large architectural firm, then at JBA. Instrumental in bringing the firm through the tough years following the crash of 2008, his main mission has been setting up the financial systems and business metrics JBA needs for continued growth.

“To me the joy and the challenge of working for JBA has always been one of taking a good company and making it great. We’re working hard now at improving the scalability, longevity and profitability of the firm, helping it diversify geographically and in the markets it serves.”

Known in the office for his warm sense of humor, Carl says he has three passions beyond his work: his family, golf and fly fishing.

ADVISOR SINCE **2011**

**VIC SIBILLA** / Executive Director of Project Operations

Always a competitor, Vic Sibilla is a former professional motorcycle racer, triathlete and two-time business owner, as well as a professional mechanical engineer registered in 19 states, with more than 27 years in the field.

As a racer, he says “I liked the fact that my performance on the track was all about how much better I could be every day, whether I could push myself to finish even a fraction of a second faster.” In becoming a Trusted Advisor, he loved the idea of joining an elite team that works on the best projects in the world, bar none. “I’ve met engineers around the world, and it’s shocking to me how good our people are.”

Today Vic is responsible for JBA’s global project delivery and operations, a job that has as much to do with his business savvy as his engineering skills. “The engineering is a lot of fun, and it keeps me learning, yet my life perspective has changed. I’m a lot more interested today in how I can help younger people grow to be the future leaders of JBA and our profession.”



## ENGINEERING THE FUTURE

ADVISOR SINCE **2009**

### **PETER GREVILLE** Executive Director – Macau

Although he was interested in electrical engineering from an early age, Peter Greville did not consider building services until he started working. "I love the challenge of the job, the wide range of tasks, the liaison with clients, and the chance to see the project as it's built."

Born in Great Britain, Peter joined JBA to serve as lead engineer on projects in the Middle East, including a new campus for Zayed University in Abu Dhabi, a huge endeavor. Next he moved to Macau to head the JBA operation there. "I don't often talk about it, but I'm very passionate about delivering the best work to my clients. JBA allows me to do that and to work on some of the largest, most interesting projects in the world."

As much as he loves his work, Peter says his priority is his family. "We have two daughters, 9 months old and 2 ½. They've changed my life."

ADVISOR SINCE **2011**

### **STEVEN FISHER** Executive Director of JBA Technology

Steve Fisher is all about passion and creativity. As a songwriter and guitar player, he toured with a band that had a top 20 album in Europe and Asia, yet at the same time he was drawn to the technology driving performing arts. "I'd say my passion is really for innovation and change, and I love the idea that what I do is always evolving, always presenting new challenges and opportunities."

Leaving music, Steve became a systems integrator and business manager, then founded a design consulting firm with Rob Pourciau, which merged with JBA in 2011. "Our dream was to do national, then international work, but it was always a struggle because we were small. We had worked with JBA on the Saenger Theatre, and we came to realize how closely our values aligned."

Steve is a father as well as a technology consultant and manager, still married to a woman he met at age 15. "Balancing the JBA family and the Fisher family is Job Number 1."

ADVISOR SINCE **2008**

### **NICK MORIARTY** Executive Director of Fire Operations

The best fire protection engineers, says Nick Moriarty, "are cut from a different cloth... They can think outside the box and be creative in finding solutions to challenging design problems."

Fire codes, he explains, were written for standardized buildings, but great architecture steps outside of the rules. "You need to be able to understand the spirit as well as the letter of the code, design safe alternatives and negotiate with the local authorities if you're going to help your clients achieve their visions."

Originally from Massachusetts, Nick enjoys trips home to visit family, and he is glad to see JBA opening an office in Boston. In Las Vegas, he most enjoys the outdoors, whether playing golf or hiking in Red Rock.

ADVISOR SINCE **2011**

### **ROB POURCIAU** / Director of Artistic Engineering

Like Steve Fisher, Rob Pourciau was a successful touring musician, the drummer in a band that was a support act for the Pointer Sisters, REO Speedwagon and other national performers. Yet success in music, Rob says, is more about business sense and teamwork than the ability to play. His experience with the band proved invaluable as a sound contractor, AV integrator, design consultant, business owner and now Director of JBA Artistic Engineering.

"When Dwayne gave us the chance to come to work here, it was like winning the lottery a second time, after the success I had in music. To have the chance to build something as special as we're building here takes timing and luck, as well as hard work and experience."

Rob says that chance comes directly from his "off center" approach to life. "Some people will always go right if you say left, out of spite or rebelliousness. That's not me. I do see the value in looking carefully when everyone is going the same way. I know I'll never stand out or do something better, if I try to take the well-worn path."



## ENGINEERING THE FUTURE

ADVISOR SINCE **2014**

### **JENNIE BOWMAN** Sr. Director of Marketing & Business Development

"It's funny, but from an early age I knew I wanted to be involved in international business, and I've always liked the creative side of marketing and PR," says Jennie Bowman. What she didn't realize was how much she would love the design and construction industry, until she became, in 2005, the Head of Marketing for Nevada's largest general contractor. "This industry fascinates me. Every day is different and I'm constantly impressed by the amazing projects we work on all around the world."

At JBA, Jennie is responsible for the growth and strategic development of the firm's global marketing, branding and communication. She loves the chance to travel to Asia as well as to promote the company across national and cultural borders. Outside of the office, she's President of the Las Vegas chapter of the Society for Marketing Professional Services, and she is active in the American Marketing Association and the American Institute of Architects. "It's a small industry," she says. "The people I've come to know are more than friends, more like family."

ADVISOR SINCE **2010**

### **WENDY CASHIN** / Director of Finance & Accounting

Definitely a people person, Wendy Cashin is not someone who sits constantly behind her computer. Instead, she reaches out actively to the people who work for her, including those at the JBA offices across the United States and Asia.

With over 20 years of accounting and auditing experience in the construction and gaming industries, Wendy is also the mother of three teenage children. She especially enjoys the chance she has now to help the younger people in her department. "JBA is definitely a place to set my heels in, stay and be part of the future."

Away from work, Wendy runs, lifts weights and is very involved with her family.

ADVISOR SINCE **2006**

### **DAVID WELLS** Director of ICT

It was Dave Wells' father who gave him his first job in telecom, but it was the innovative nature of the industry that kept him there. "I love the fact that technology is constantly changing, and that we have to keep learning and growing to give our clients the best designs."

One key to JBA's success is its outside-the-box thinking, Dave believes. Another is its willingness to mentor young engineers. "I remember all the time Dwayne Miller spent with me, showing me how to stay within the standards of good design, yet at the same time pushing the limits to achieve something better for a client. Now my role has changed, and I have the chance to pass on what I've learned to those who work for me."

While he's always searching for a good balance between work and family—for himself and for his staff—Dave is happy to see how his two young sons look forward to Take Your Child to Work Day each year. He hopes they will follow their dad into a technical field, as he followed his own father. "I'd like to see them excited about what they do each day and, like me, have the opportunity to challenge themselves throughout their careers."

ADVISOR SINCE **2008**

### **KACEY DOWNEN** Sr. Director of Facility Management

"There's something we call 'JBA DNA,'" says Kayce Downen, explaining her own eight-year rise from receptionist to operations management.

"I don't know how to explain it. It's the drive someone has. If they see that in you, they'll push you along, teaching you more and more about the business. You can tell when people start if they have the DNA. If they do, they're going to love it here."

Kayce has excelled with all levels of organization, leads by example, and builds diverse, high performing teams. "I'm so proud to be a part of JBA. We're a large company with a small company feel. I love the fact that we really do care about our clients, about getting their projects done on time, about doing what's right."

"The Executive Group saw something in me, and then mentored and helped me to grow. They've given me a career I can be proud of, a chance to make a good living and provide a better life for myself and family. I'm very fortunate to be part of such a great company."



## ENGINEERING THE FUTURE

ADVISOR SINCE **2015**

### **KEITH CHEONG** Executive Director – Hong Kong

Keith became an electrical engineer because he was interested, even as a child, in how things work, he says he is most excited today about how people collaborate.

“What fascinates me is how I can best lead a team to create something truly innovative and of lasting value.” That’s a special challenge in Asia, where a design team may have members from all over the world. Yet Keith is comfortable in his role developing new clients from various cultures. “We’ve made some big hits recently in Hong Kong and the Philippines.”

Married and hoping to start a family soon, Keith enjoys travel and yoga, and he spends his free time with his wife, family and friends.

ADVISOR SINCE **2008**

### **IRIS LAM** Director of Facility Operations – Asia Pacific

For Iris Lam, the personal relationships at work and home are the most valuable parts of life. Her biggest challenge, she says, is to build a team in the office at Macau with the kind of values and comradery she sees at JBA Las Vegas and other, more established locations. “We want people who are enthused about the company, enjoy the work and can treat each other as a family, because the company is our second family.”

Leading the day-to-day operations team for JBA Asia, Iris is also a liaison between the Asian and North American financial, human resources and administrative departments, helping drive the firm’s global expansion.

Iris says she is grateful to JBA and the opportunities it is giving her to grow her knowledge, skills and career. She also appreciates her growing ability to save for the future, travel, and support her mother.

JBA’s clients can expect the same world-class service they’ve come to depend on as the future leadership of JBA moves forward toward the next 50 years!

### **MICHAEL SHAFER**

Sr. Director of Consulting / Phoenix

### **BRIAN PATRICK**

Director of Consulting – Technology / Atlanta

### **LARRY SPURGEON**

Director of Consulting – Technology / Las Vegas

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Project Director / Orange County

### **NICK ICAMINA**

Project Director / New Orleans

### **KARIM JABAL**

Project Director / Las Vegas

### **DAVID PRICE**

Executive Advisor / Orange County

# ENERGY TRENDS

by Ben Heraud, CEO - Energenz



## EFFICIENCY, FLEXIBILITY, SAFETY & SECURITY.

As JBA celebrates its 50-year anniversary, it seems like a good time to pause and think about what a building used to be like 50 years ago. When Howard Hughes moved into the Desert Inn and decided that he liked the place so much he wanted to buy it, what did its systems look like?

Sure, it had some of the systems we have today; land telephones, lights, maybe a television and air conditioning. But there were so many systems that simply didn't exist yet. Efficiency was barely on people's priority list as long as everything worked. Energy was cheap and the only greenhouse gases were for tomatoes.

Today, we are living in the age of big data. Buildings have the ability to run many of their systems automatically and with Wi-Fi expected as standard; smart phones, room control, occupancy control, and more and more automation, spaces are more efficient, secure, safe and flexible. With this extra functionality, buildings are also infinitely more complex. And of course, energy is not as cheap as it was and companies report greenhouse gas emissions now.

Cities across the world are becoming smarter; by harnessing the latest technology, they are delivering a better level of service while helping countries and companies to meet global sustainability goals in line with the historic agreements reached at the Paris Climate Conference.

With buildings using approximately 32% of all energy worldwide, these improvements are an essential step towards sustainability.

## EMERGING TRENDS & TECHNOLOGY

Our buildings are only going to get smarter and more complex as businesses seek to lower energy costs. Let's take a look at some of the critical emerging technologies and trends that are affecting businesses today:

### Smart Energy Analytics Programs

Many businesses are now using smart meters to track energy consumption and identify possible savings. By incorporating information such as weather reports, utility rates, and employee behaviour, energy use can be heavily optimised.

Similarly, analytics can be used to track and analyse energy consumption used by heavy machinery and equipment. Specialists then use analytics software to find patterns that show faults and opportunities for improvement.

The key is not just in tracking the energy data – but in applying the correct analytics so that useful, actionable data can be obtained.

### The Importance of Future-Proofing Buildings

*How will buildings look in 2066?*

Just as the architects and engineers who designed buildings in 1966 could not have conceived of the multitude of technologies that would be advancing on buildings today, designers now must try and look to the future of buildings. For example, as the Internet of Things (IoT) rises, buildings will be able to take advantage of the vast array of networked sensors at their disposal to actively measure room occupancy and adjust energy usage in different zones accordingly. Advancing some buildings to this level may initially be costly, but the long-term efficiency savings ensure that it pays for itself in the long-run.

Will Artificial Intelligence, biometrics and predictive analytics know what channels you prefer in your hotel room? Will you be watching TV or will you be using a virtual reality machine? Will buildings know the temperature you like your room? The temperature of the water in your shower? Will lights tell you how much longer they have before they fail?

Who knows what technologies will take off, the one thing that we can guarantee as a constant is change. ❖



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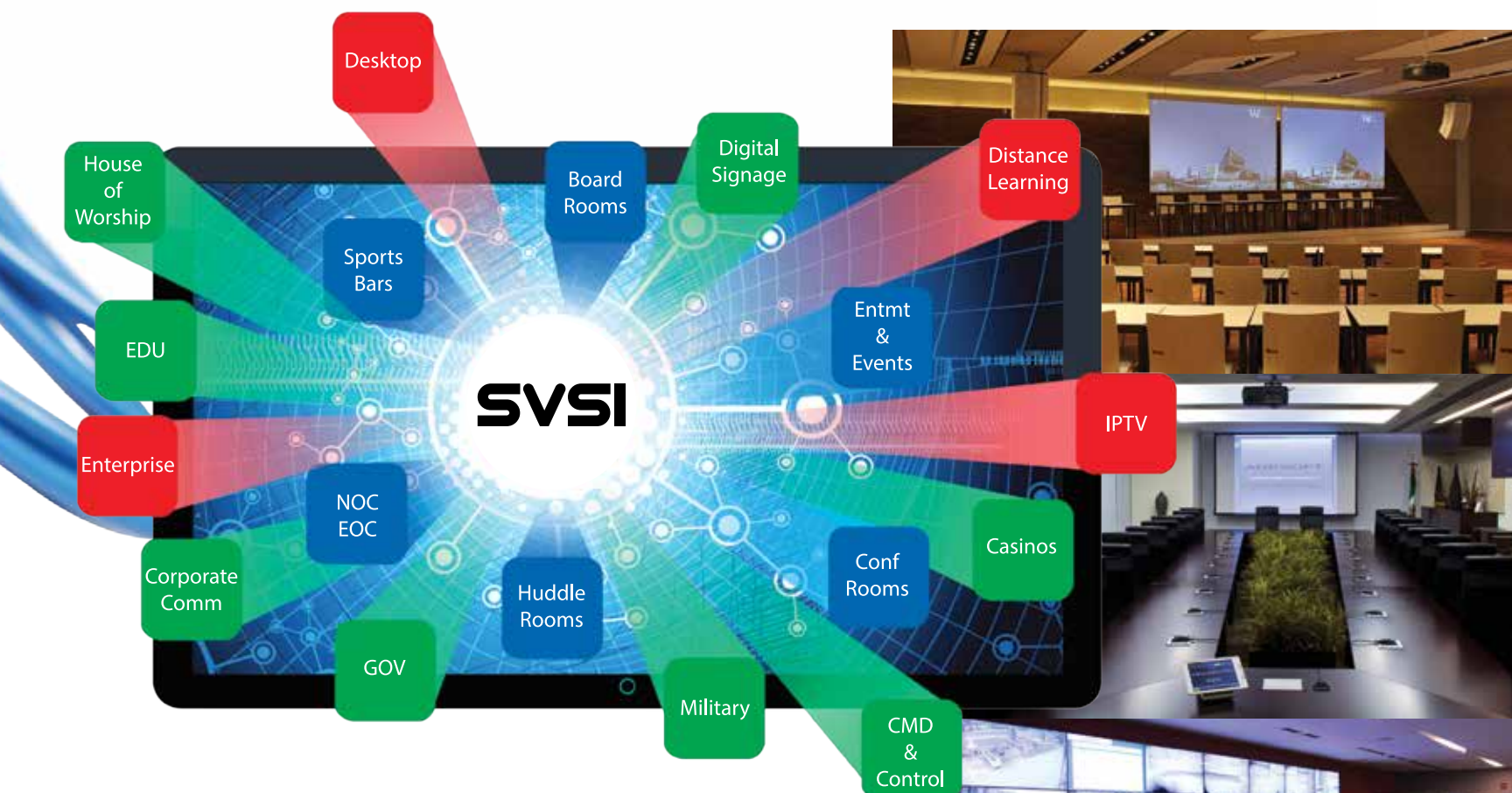


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RHETROACTIVE would like to extend our warmest regards in celebration of JBA's

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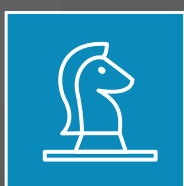
RHETROACTIVE and JBA's Artistic Engineering group continue to expand our relationship to collaborate on a wide variety of location-based entertainment projects around the world. RTA & AE are currently working together on two projects where our joint strengths in creative, storytelling and technical design seamlessly merge to create attractions that inspire, entertain and engage families for years to come.



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**Congratulations JBA, on building better communities for the last 50 years!** As Gensler also celebrates our 50<sup>th</sup> this year, we look forward to partnering with innovative teams like yours for the years to come. Cheers!

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