



Green That Makes Cents

• By Jeff Pinyot

In 2007, our company successfully trademarked the slogan Green That Makes Cents®. Those four words say it all, if it were actually possible that you could make money by “Going Green”; the world would be a better place. It seems that in most cases, “Going Green” costs more than not “Going Green”.

Even if you don't think that you can earn back the extra cost, because you don't charge for parking, you still may have ways to justify the extra expense of going the sustainability route.

In fact, the USGBC's LEED (Leadership in Energy and Environmental Design) certification may add to a project's cost from 1 percent to 5 percent to meet its Silver level of certification. That range is wide and it crosses all types of construction projects. While companies like ECO Parking Technologies, Indect, TKH (Park Assist) and other technical leaders of the parking industry offer products that add cost to a parking structure's bottom line, the technology they offer may result in a revenue improvement that can quickly erase the 1 percent to 5 percent through Return on Investment.

Return on Investment

Even if you don't think that you can earn back the extra cost, because you don't charge for parking, you still may have ways to justify the extra expense of going the sustainability route. For instance, say an owner is having trouble filling all of the spaces of his 1,000-space parking structure that he built for an average cost of about \$35,000 per space.

His property doesn't fill up because spaces are hard to find, and the operator closes the garage down at 95 percent

full so as not to aggravate clients. That means he essentially paid 50 spaces x \$35,000 per space = \$1.75M more for his garage than he needed. If he had only had the vision to install a system to fill ALL the spaces while also improving speed to park and the customer experience.

If the owner were to, instead of closing the garage before it's fully occupied, install a PGS system to help locate the empty spaces and fill the last 5 percent of the garage spaces, this sustainable technology might actually be a Green Product That Saves Cents by building a smaller, “Right-Sized” garage.

Instead of building a 1,000-space garage to park 950 vehicles, he builds a 950-space garage and fills all the spots. Let's assume that the PGS system is camera based and costs \$600 per space installed. Many come in less than that, but let's cover ourselves on this. The system would cost 950 spaces x \$600 = \$.57M to install. The savings would be \$1.75M (wasted construction costs of an overbuild) - \$.57M = \$1.18M!

Now, what if that were a garage that DID generate revenue? Let's use the same 1,000- space existing garage and place it in Chicago. Putting dollars in place, since the garage is in Chicago and an average turn costs a parker \$42 in that city, there is some serious money to be made. This 1,000-space garage closes at 950 spaces sold, leaving 50 spaces open. If we can sell those 50 spaces 300 days a year, you have 300 days x 50 vehicles x \$42 = \$.63M in increased ANNUAL revenue, I repeat...ANNUAL! About the same savings as if you didn't build the extra 50 spots, but ANNUAL INCREASE!

Upgrades Make a Huge Difference

Now, let's go further and leave nothing to discount this. Assume the PGS has an annual cost of Software as a Service Fee (SaaS) or a Maintenance Agreement and some maintenance costs above that of 5 percent of the initial

cost per year or \$30,000 (this is a high number, but it covers the worst case). That brings the total first cost at exactly \$630,000 or the same exact number of the first-year increase in revenue realized by installing the system. Basically, the system paid for itself in only one year.

Let's go further yet. Say you were considering selling the garage and you didn't want to spend the money to do the PGS upgrade, so you sold it at 6 x EBITDA or \$31.80M after Revenue minus Expenses. This is based on one turn at \$42 per turn x 950 spaces (you weren't selling 50 per day) and assuming a 40 percent profit after expenses. If instead, you decided to install the PGS system before you sell it and experienced the additional gains using year one to pay it off, leaving 5 years of revenue increase, reduced by the 5 percent maintenance fees, you would have been able to sell the property at an additional \$3.3M or 10 percent more.

That is only looking at revenue. The savings you experienced by having cameras taking video also eliminated false Trip and Fall claims, may have allowed you to sell spaces at premium prices because the system provides parking data to support price changes and the colored space indication LEDs can be used to zone by time of day. That extra revenue is simply icing on the cake. None of these numbers include multiple turns into the equation which will skyrocket the profit.

I'll talk about lighting in more detail later when it is a part of the PGS system, but let's not think that lighting benefits have disappeared in *Parking Today*. There are still thousands of garages that have never taken the time to relight.

One real story of a lighting redo in Chicago goes like this. The garage was a four-level underground. Three levels were regularly filled, leaving one level empty. The owner was given an installed price to relight the structure and sat on it for three years, finally deciding to relight with new energy efficient lighting.

After one year of operation, the parking operator contacted me and dumbfoundedly expressed that his revenue in the garage had increased in that one year, over \$1M. He said that

the lighting was so poor before and so good now that monthlies had returned and stopped to tell him that they were back for good now that he created a safe environment for them.

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This 1,200-space garage used to have about 300 spaces empty and now sells on average at least 100 more spots per day, thus increasing annual

revenue buy over \$1M. This gain is on top of the fact that the energy and maintenance savings paid the installed lighting upgrade off in two years. That owner sold his garage about two years after the lighting retrofit for \$6M more than he would have had he not done the lighting upgrade.

On a side note, new LED lighting technology has allowed a 40 percent reduction in numbers of lighting fixtures required to light a parking deck than non-LED technologies without any lighting compromise from even distribution, up lighting, and Max/Min ratios. This is a huge sustainability gain and cost savings for owners. Ask for Type 2 Distribution and don't settle for old methods of lighting parking structures.

Taking Sustainability to Another Level

Here's another example that takes sustainability to another level. A major university recently told me that they sell 90 percent of their spaces to students and faculty, underselling the parking asset by 10 percent to reduce the pain, anxiety, and time (trolling) to find the elusive 10 percent.

They advised that they have a demand for 900 more spaces. Their solution: Build a 1,000-space structure and sell their normal 90 percent, yielding the 900 more spaces that they need to support the demand. In the Midwest, that garage would cost 1,000 x \$35,000 or \$35M to build (Thanks WGI for your annual cost estimates for new parking structures ... what a blessing for the industry to have that).

What if that university engaged one of the remarkable PGS companies in our industry instead of building a new structure, and had them install their camera-based PGS system into all of their existing parking garage assets? Would it be cheaper? Let's see.... So, this university has a current inventory of about 10,000 parking spaces, 9,000 sold. If a camera-based PGS system (great for universities) would be installed marking the existing spaces at say a cost of \$600 per space installed (the same number we used in our previous example), it would cost the university say, \$6,000,000. A new garage would end up costing the university \$35,000,000 - \$6,000,000 =

\$29,000,000 more than needed.

Saving on new construction also has a huge environmental impact. No construction materials, no earth moving, underground, saving the land use, and much more. Those costs aren't figured in here. That same space could be used for a new dorm or classroom building or even green space. The other intangible is time. In a matter of months, the university would have their parking issues solved instead of waiting on a two-year design, bid, build project.

If you've read this far, I think you would agree that the evidence presented so far justifies a PGS system in a parking structure as a solid Sustainable Technology and one that is Green That Makes Cents! The story only gets better from here. If a PGS system can save environmentally harmful construction projects, reduce trolling time in a garage that results in saving greenhouse gasses, as well as your valuable time, how much better would it be if a PGS system were also a Lighting Control System, a Safety Feature, and Energy Efficient LED lighting?

An energy saving LED lighting solution has already proven to save around 60 percent or more energy. When coupled with a smart Lighting Control system, can see up to 90 percent savings over the original, existing lighting.

PGS to the Rescue

I'd like to use a real project example that actually bid and installed in a similar manner as above. The Village of Arlington Heights, Chicago, advertised for a new Parking Guidance System in their Vail Avenue Garage. The specs were intentionally slim and the PGS technology was undefined as the village had assigned a team to evaluate and score the responses. The sky was the limit. Submit a bid and justify the bid in hope of being interviewed by the selection committee.

Our company was approved to bid the project and just as soon as possible, I visited the existing structure to evaluate how we would apply our solution options. Imagine my surprise and glee when I arrived late one evening to see a poorly lit parking

structure begging for some TLC. Even before I could assess the parking guidance needs, I noticed that the lighting was awful, dated, and in need of replacing. Immediately, I knew that in our bid submission, I would address more than their PGS needs, and the specification allowed us to do so.

When you consider the word Sustainability, it can conjure up many thoughts. The first is obvious and is really the intent of the word, it's about sustaining our environment, or planet. But it also can mean long lasting in its physical design and installation. I recall when Ohio State University decided to P3 their parking assets and the entity of Campus Parc won that huge deal.

It was a 50-year deal out of the gate. Because upgrading the facilities was part of the consideration, one of the first questions asked was, what light fixture will sustain the contract time of 50 years? Parsons Brinkerhoff, an engineering firm in NYC answered that question and Campus Parc selected that fixture to replace the current ones in 15 of their 17 garages that they had in service at that time. Sustainability meant a product and technology that would perform over time, sustaining the length of the project.

So, focusing on the environmental side of Sustainability, after reviewing the Vail Ave garage that evening, I felt that the Village had a larger problem, and that was poor, underperforming and costly, dated lighting, a sustainable nightmare. Not only were they consuming too much energy, think burning too much coal, but they were also repairing old fixtures with new parts. If Arlington Heights would consider a bid that dealt with Lighting AND a PGS solution, that would be the most sustainable offer without argument assuming any of the PGS bidders' systems would perform equally.

A PGS system is brilliant in how it serves customers. At trade shows people come up and share how they love pulling into a casino garage, an airport, a mall, and other large parking venues and quickly find a spot. They always ask if it was one of

our projects and while occasionally it is, it usually isn't. Our industry peer group mentioned previously has done a marvelous job in representing the PGS art to the parking community.

Follow the Bright Lights

Imagine if on a cruise ship, there was a sign in the main hall that lists all the open eating options, seating available, food type served at each location, and let's throw in number of empty chairs available poolside and spaces in the hot tub. Wow, would that be a winner. PGS systems turn parking into a party.

Minimal Trolling through a garage to find an open space results in less fuel consumption and a faster parking experience. It surely also reduces the arguments between husband and wife as to where to park (that may add years to your life). I already stated that it can save huge costs in building the right sized parking structure.

A PGS can use various colors beyond Red, Green, and Blue to mark groups of reserved spaces for a specific purpose like: EV, ADA, Resident, Bank, etc. that can change in quantities marked by the hour-by-hour demand and learned through the parking data that can be mined from the system. For instance, residents can park under Purple from the top down and during the day when many are gone, that Purple section can be reduced and those in lower purple section can switch to Green, so the public, general admission parking inventory can be increased and a space can be double used. Talk about Green That Makes Cents!

The Village of Arlington Heights selected the bid that included Lighting, Lighting Controls, AND PGS all in one device! The Village saved on putting an RFP out to replace the lighting as it had considered and ended up doing it all in one project. Huge first cost savings, Huge environmental savings, huge time savings, and huge safety enhancement, and even a utility incentive to reduce the first cost. Also, since the system was also a Wireless solution, the city didn't have to place open tray or close conduit below the double T's and saved

on all that labor and material costs.

During the COVID-19 pandemic closures, the Village used their PGS system to dedicate Yellow parking locations on the surface level parking for the community to use to park for food delivery. The local restaurants were directed to deliver the pickup orders to the Vail Ave Garage, Yellow Zone in order to keep cars off the street and eliminate unsafe double parking while reducing congestion. The system worked flawlessly and the PGS system encouraged and supported the business element of the Village.

When integrating Lighting into PGS, a door swings wide open. The sustainability impact on combining those elements of lighting and PGS are huge. Many clients that need to redo lighting and can justify it normally on a 24-month ROI, now see PGS as a viable and affordable option to add to a project. Instead of Level-by-Level counting, they can now afford space by space counting and group indication with colored LEDs.

Now, almost all of the install of a PGS is covered by the Lighting installation costs, making PGS even more affordable. On top of that, parking garage owners are still able to take advantage of the EPACT2005 tax incentives of \$.60/SF of covered space that is available when you relight a parking structure and the ongoing attractive utility incentives.

Sustainability's first winner is the environment. The other winner is the sustainability of your financial assets. Green That Makes Cents should be a mantra that our industry embraces. The home run here is: Can the parking industry embrace technologies that improve the environmental sustainability of their parking structures environmentally and also improve the financial sustainability of their investment? The answer is simple: YES!

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