

# His beautiful laundrettes

*Ed Kwasnick streamlines the clothesline*

BY STEVEN AVERETT

FOR MOST PEOPLE, DOING LAUNDRY EFFICIENTLY MEANS successfully swapping loads before the end of a prime-time TV commercial break or shrewdly combining jeans and whites to save quarters. But Ed Kwasnick, founder of Turn-Key Industrial Engineering Services, is dealing with laundry on a whole different scale. By designing laundry facilities and offering process improvement and project management consultation for hospitals, uniform and linen rental companies, hotels, and resorts, Turn-Key is applying industrial engineering acumen to a heretofore untapped industry.

Kwasnick began his career as a mechanical engineer, designing furnaces for Reynolds Metal Co. However, it wasn't long before his co-workers realized that he was better suited for other things.

"Thermodynamics and heat transfer were probably the two courses I liked the least [in college]," says Kwasnick. "So here I am designing furnaces and I'm working side-by-side with their facility planners on where the furnaces should be located and some other aspects. I started asking them some questions one day while we were doing a planning session: Have you ever really thought about moving furnaces closer to this location because



it's closer to the casting pits. Look at the travel that you have to cover to bring the aluminum in to the furnaces. Should we look at a staging area?"

The company moved Kwasnick into the facility planning division, where he worked for three years. In 1993, working with a rental uniform company, he got his first exposure to the laundry business. Intrigued by the industry's unique challenges, he gradually sought out work renovating existing laundry facilities and designing new facilities. This helped him realize that there were few companies with the special capabilities needed to provide comprehensive design services for laundries.

"There were folks that could do equipment layout. There were



Photo by KMS Photography

architects that did building design. And there were people that could supply equipment, but no one really looked at facility planning or process improvement as their core responsibility,” says Kwasnick. In 1998, he sat down with his wife (who would later become his first employee) and told her of his plan to quit his construction firm job and use their savings to start a consulting company specializing in the needs of industrial laundries.

“I’d love to tell you that I did a marketing study or something, but I didn’t. I basically said, ‘I think there’s a need.’ And I contacted enough of my friends in the business who said, ‘Yeah, I think there’s a need, too.’”

Turn-Key started small, earning business from companies

willing to take a risk on a start-up with no track record. “We were a new company and they were taking a risk by saying, You don’t really have a track record and I don’t really know you from Adam, but based upon our conversation I’m willing to move forward with your services.” By hooking influential industry leaders such as John Sights of Sitex Corp., Turn-Key quickly gained credibility among the laundry elite.

“Ed Kwasnick’s industry experiences as well as those of other Turn-Key engineers and the enthusiasm they had for our project were deciding factors in the selection,” says Sights, whose company has continued to rely on Turn-Key, recently calling on them to help design a 73,000-square-foot industrial laundry facility.

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## The happiest laundry on Earth

Turn-Key's biggest coup came in April of 2000 when, after only two years in operation, they landed a contract helping Disney streamline and expand what was already one of the largest laundry operations in the United States: the laundries of Walt Disney World.

"I did not know anybody over at Disney, but I knew that they had some very large laundry facilities and I knew that they needed some outside expertise," recalls Kwasnick. "I heard through the grapevine that they were building a new facility and basically cold-called them and explained who we were and what we did and then gave them [the contact information for] a couple of those raving fans that we had done a good job for early on. And that was it."

The sheer complexity of the task faced by Walt Disney World's laundries is illustrated by the fact that each of the 20-plus

on-property resort hotels has bedding unique to that location. "They have a huge issue with bedspreads because each location has a specific bedspread that really fits their theme. So getting all of that into one big plant, and then sorting it, and washing them, and sorting them back out, and folding them — logistically, it's quite a process to go through."

Relying on a combination of three gigantic laundry facilities, Walt Disney World processes approximately 1.2 million pounds of hospitality laundry (bedding, towels, and any other washables not used in the resort's restaurants) a week. "One of the stats that they have on the wall at the Disney facility, which I love, is that if they took all of the sheets that they wash in a week and tied them end-to-end, they would reach from Orlando to Key West."

Kwasnick said that all of that wash adds up to quite a show. "One of the things that Disney does, and it's an income stream for them, is the Behind the Scenes Tour. ...When they were designing the laundry, they actually built a second-level mezzanine balcony overlooking the facility with just that thought in mind — that tourists would come through. It's kind of neat. If you're staying on site, when you go back to a resort, you think, Wow! All of these sheets and pillowcases and all of these towels and everything, they got processed in that plant. I saw them washing them right there."

Still, it is only the volume and the level of automation that makes the facility unique. Whether at home, in a small industrial laundry, or a huge facility like that of Walt Disney World, the four key elements used to wash clothes are the same: temperature, time, chemicals, and mechanical agitation. By balancing those immutable elements, a laundry is responsible for both the quality of the product when it leaves the facility and how well that product will hold up over time. Any attempt to improve the efficiency of a laundry must address that responsibility. Thus, accurate sorting is crucial.

The sorting process takes into account such factors as amount and kind of soil, washroom technologies, and detergent types. Cleaning ground-in grease from a mechanic's uniform is a far different thing from taking lipstick out of a washcloth, for example, with each application requiring unique amounts of mechanical agitation and chemical cleanser to sanitize the items without being overly harsh and breaking down fabrics prematurely.

The fundamentally immutable nature of laundry processes means that Turn-Key often has to look for more basic ways to wring inefficiency out of the system. One way of doing that is by helping laundries make the most efficient use of utilities —



**Top:** Employees at the COMTEX health care laundry facility in Columbus, Ohio, use chutes to sort soiled laundry into the proper categories.

**Bottom:** Clean laundry that requires pressing (sheets, pillowcases, etc.) passes through the machines on the left where it is ironed, folded, and stacked. Other laundry (towels, gowns, etc.) is folded and stacked by the machines on the right.



Photos by Feinknopf Photography

primarily gas and water — through simple maintenance and other means. “Any time we can save on the water side or the heat side, any time we can reduce the amount of steam usage necessary in a plant, even at a very small level per pound, it becomes a huge dollar figure,” says Kwasnick. Case in point: It takes 1.8 million gallons of water a week to empty Disney’s hamper.

Though Turn-Key’s bread and butter is still small and medium-sized laundries, their successful partnership with Disney has yielded other big-name clients. Recently they contracted with Atlantis Resort in the Bahamas to design a 44,000-square-foot expansion to the hotel’s existing laundry facility. Ragheb Dajani, vice president of Kerzner International Development Ltd., the firm executing the design, says that when the expansion is completed later this year, laundry output will increase from 15 million pounds to 37 million pounds annually.

## Fresh linen

Despite the fact that laundries do not manufacture anything, Kwasnick says they are essentially defined by the quality of their work. “In the laundry industry, it’s very easy to see when someone’s into quality standards, because there’s a stain and you didn’t try to get it out or there’s a tear and you didn’t fix it. So really, the whole industry has a service angle that I haven’t seen in other industries as much.”

Kwasnick says that one of the reasons his company enjoyed so much success early on and continues to carve out a niche is that few laundries have moved to take advantage of even basic industrial engineering concepts: “In our industry there are still a tremendous amount of opportunities to improve by just changing processes and procedures. There’s a lot of what people would call low-hanging fruit because the industry has not consolidated. There are so many independent companies out there that have not standardized their processes.”

To help his employees and customers keep sight of the fundamentals, Kwasnick developed a short list of the company’s core industrial engineering philosophies. Though much of the list may strike the ardent industrial engineer as elementary, for many of the company’s clients, the ideas come as a revelation.

Contrary to common-sense facilities planning, Kwasnick says that in his experience, most laundry facilities are planned back-to-front. “Most people have said, Hmm. I think I need about 60,000 square feet. They go to an architect. The architect designs 60,000 square feet. They build 60,000 square feet. And then they bring in the equipment vendors and say, OK guys, there’s the open floor space. Figure out how to lay



## TURN-KEY’S IE PRIMER

### Inside-out design:

Start with the process and design the facility around it

### Balanced production flow:

You are only as strong as your weakest link

### Master planning:

Begin with the end in mind

### Space utilization:

Use the cube

### ROI vs. wow:

Get the biggest bang for your buck

### 10 pennies = one dollar:

Small improvements lead to big savings

### The Midas touch:

Perform minimum touches with maximum value

### Change vs. improvement:

Change + benefit = improvement

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Ed Kwasnick achieved success by recognizing the industrial engineering needs of an underserved industry and starting a company with the sole purpose of meeting those needs.

Photo by KMS Photography

your equipment in there. What you end up doing is shoehorning things in. You always end up with dead spots or an area where you wish you had a little more space, or wish the column spacing was a little bit wider.

“What we do first is we say, ‘Look, what’s making you money, Mr. Customer? The reason you’re in business is because you process and deliver laundry. Let’s start with the process of the laundry and then work our way out.’ And the building really becomes more of an envelope than a starting point.”

In approaching established facilities, Kwasnick says he sees another consistent trend. “Typically, most laundries are designed with a lot of work-in-process buffering storage to keep between processes. So you have all of this capability to produce, and then you store it all on the production floor, waiting to go on to the next process.” By emphasizing balanced production flow, Turn-Key shows its clients how elimination of that buffering can ultimately make its plants more efficient.

Both of these problems stem from what Kwasnick sees as a failure to account for the big picture. He prescribes master planning, approaching the design and operation of a production facility with a long-term goal in mind. “Just like you do strategic planning for your business, strategic planning for sales, strategic planning for marketing, you need to do strategic planning for your production environment,” he notes. “You need to start with where you want to be 10 years from now and then design your facility to match up with that concept. Then grow into it, as opposed to just growing haphazardly and plunking down a couple of pieces of equipment here and there. Before you know it, you have to drop breadcrumbs to find the product flow through your facility.”

In streamlining a design, Turn-Key’s engineers know instinctively to strive for the Midas touch, eliminating unnecessary process steps and the fat in the production process. “Every time you touch the product you should be adding value to it,” Kwasnick proclaims. “You shouldn’t just be moving it from point A to point B. Then, you want to eliminate the amount of times you touch it.

“Up until 10 years ago, we were a very manually based industry. We were hiring a lot of people off the street to do laundry like you do at home: Pick it up, throw it in the washer, wash it, pick it up, throw it in the dryer, dry it. There have been huge advancements in the last 10 years in technology, where much of that has been automated and we can eliminate those touches.”

Smart use of space is another basic that Kwasnick says gets overlooked in most laundries. Turn-Key’s engineers urge

facilities to “use the cube” and make the best use of vertical space by moving long-term storage and low-value production processes overhead while bringing high-value production down onto the floor. By helping uniform distributors move their highest-volume items closer to the picking center and pairing the most common-colored pants with the most-often coordinated shirts, Turn-Key helped clients employ IE principles that have been in use in other industries for decades.

At the same time, Kwasnick says there’s a misconception among many laundry owners that going in and muddling with a system is inherently a good thing. “A lot of times folks just want to change things because they feel like if they change it, it will get better. ...Change isn’t good. *Improvement* is good. Change for the sake of change doesn’t really do anything except confuse people. So we talk about change plus the benefit equals an improvement, and that’s really what we’re going after when we’re talking about process improvement.”

Instead of providing two or three big changes that Kwasnick says most of his clients ask for initially, Turn-Key explains how a series of small improvements will add up to the biggest savings over time and lays out an implementation plan. All of this is done with an eye toward long-term return on investment, as opposed to high-concept, low-value improvements.

## Pressed and ready

With an 84 percent increase in sales last year, Turn-Key seems well positioned for the future. While the six-person firm continues to focus on the largely untapped laundry industry, Kwasnick recently formed a partnership with St. Louis-based Murray Co. that will add construction contracting services to Turn-Key’s front-end engineering capabilities. He hopes that down the road, Turn-Key will expand out of laundry into other industries.

No matter which direction the company heads next, Kwasnick, the converted industrial engineer, says he plans to stick close to his professional passion: “I love the process of pulling together the data from the customer, turning that into some kind of production model that predicts what their needs are going to be, and then coming up with a facility design — the actual designing process. Trying to squeeze as much as you can out of the equipment and getting into as small a footprint as possible and still make it a usable environment where people can get around, fork trucks can get in and out, and the maintenance crew can do their maintenance. That, to me, is probably the most fun I have.” ~