



Hillphoenix

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White Paper

**You're only as Good as the
People That Surround You —**

*Publix and Hillphoenix Partner to
Improve Technician Skills*

“You’re only as good as the people that surround you” ... sage words of wisdom spoken long ago from a father to his son who had just graduated with honors from college. The young man, his ego freshly stoked from his conquest of academia, had just announced his intention to conquer the problems of the world single-handedly. Why, any company in their right mind should hire him knowing that his superior intellect would allow him to achieve results in such a solo fashion.

It didn’t take long after the young man was hired by his first employer that the words of his father took on real meaning. His naivety was met head on by “workplace reality” and he quickly discovered that trying to drive a project was much like the way a wheel works. He was the hub at the center of the wheel. But the wheel could not function properly without the support of each of the spokes connected to the hub. Each of those spokes made a contribution that collectively resulted in a fully-functional wheel. The “spokes” impacting his project efforts were other individuals, departments, or even other organizations. Highly successful companies comprehend this and define their hiring practices accordingly to “surround” themselves with the best people they can attract.

Publix Supermarkets and Hillphoenix are two such companies who understand this conventional wisdom. For some time now, these two influential industry players have enjoyed a close relationship that has proven to be mutually advantageous. The two have collaborated on efforts focused on their shared interest — supermarket refrigeration. The mutual exchange of ideas and information between the two parties has resulted in a partnership that has produced improvements in refrigerated case design as well as refrigeration system operation. Until recently, the focus has been primarily on equipment and process. But that’s all changing with the recognition of a potentially serious problem for the industry brewing on the horizon — one that involves a significant “spoke in the wheel of refrigeration” and would adversely affect both companies.

Statistics show an emerging problem with the number of available qualified refrigeration technicians to serve the industry’s needs. This shortfall is evident in recent Bureau of Labor Statistics (BLS) survey data. For instance, the BLS estimates that the number of HVACR (Heating, Ventilation, Air Conditioning and Refrigeration) mechanic and installer jobs will increase by 21 percent through the year 2022 — nearly twice the growth of employment overall. Likewise, the Social Security Administration forecasts that 22 percent of the U.S. workforce will retire during that same period. This portends a serious capacity issue for the industry. As projected demand for qualified technicians heats up, the supply of trained HVACR talent does not appear to have the ability to keep pace (*figure 1*).

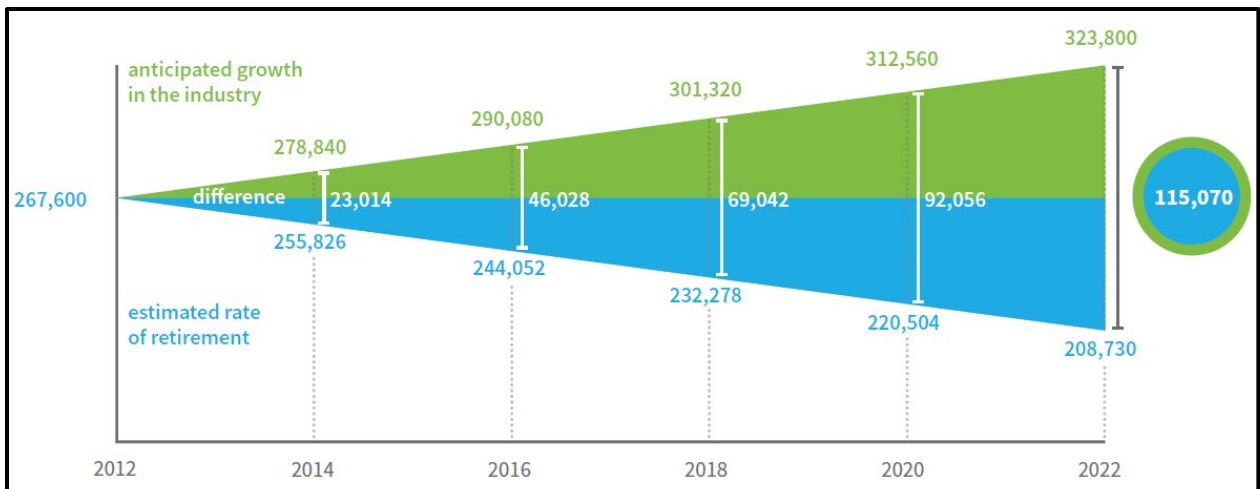


Figure 1

Additional studies have collected HVACR industry employment information that corroborate the BLS findings and further the severity of the looming issue. One such study, conducted by Burning Glass Technologies, investigated the length of time that HVACR jobs were posted before the position was filled for each state in the U.S. (figure 2). A quick look at the map shows that the vast majority of the country waits more than a month, and as much as a 1-1/2 months, to fill their technician needs. Currently, this is projected to get worse.

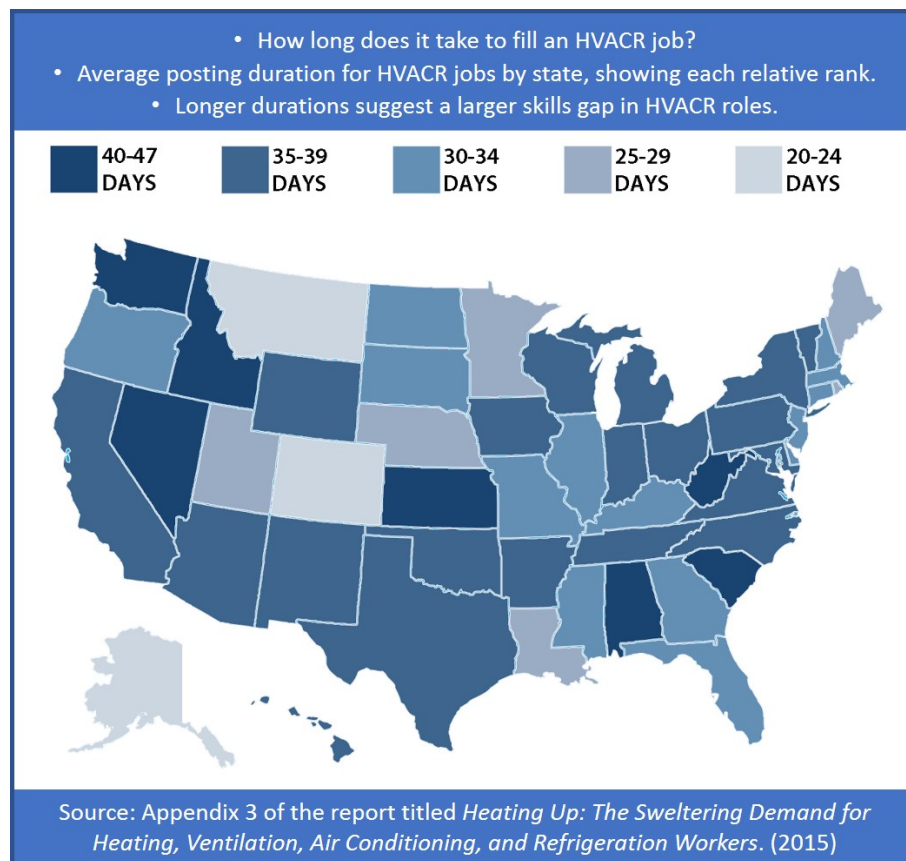


Figure 2

Publix has noted the effects that this shrinking technician capacity issue has had on the execution of a number of their different new store and remodel construction projects. Likewise, Hillphoenix suffers in measurable ways when projects of this nature are delayed. This shortage of manpower, in and of itself, is a serious enough challenge to the aspirations and business goals of food retailers and OEMs alike. But making matters worse, there has been a noticeable decline in the skills level of a substantial portion of the available technician pool, manifesting in the reduced quality of their work.

Leveraging the strength and capabilities of their partnership and realizing that this was yet another example of “you’re only as good as the people that surround you”, Hillphoenix and Publix decided to take the call to action and do something about it. After collective discussions, they set out on a mission to significantly improve the skill level and performance of both Publix employees and the refrigeration contractors hired to support construction activities. Some form of targeted, structured, skills-focused employee and contractor training would serve as an ideal starting point. In true Pareto fashion, they decided that the initial focus and scope would revolve around confronting the topmost area of concern to both — refrigerated display case installation — something whose end results are prominently visible to all Publix store shoppers.

The training effort needed to center on the specific details involved in the proper positioning and installation of refrigerated product display cases. The demons of poor case installation run the gamut from “what you do see” to “what you don’t see”. Fit and finish issues, readily apparent and visible to all store customers, degrade the image of the store and company. But perhaps equally as compelling an area of concern is the fact that poor installation often results in unseen energy waste and its associated cost. Improperly installed refrigerated cases (not in strict adherence to manufacturer recommendations) often exhibit poor performance with regard to energy efficiency.

Examining the problem, the most significant contributor to poor installation was found to involve the installer’s (contractor’s) attention to specific “details” required for a proper install. Adherence to these “details” drives both the consistency and quality of the end result. The Hillphoenix/Publix team decided to use a popular lean manufacturing technique to comprehensively capture the way things were being done and identify where there were deviations from the required practices. The technique, a throwback to the 1980’s Japanese Kanban manufacturing concepts, involved the video recording of multiple installation projects over a six-month period. The videos were then analyzed by Hillphoenix/Publix team together with some select contractors to document the “do’s and don’ts” of all of the individual tasks involved in an installation. The videos were then edited to capture all the proper techniques and methodologies and compile them into a detailed video guide to use as a training tool. This provided a “focused visual learning experience” for installers and contractors with up-close, clear scrutiny of the process the way each step needed to be performed. The video guide

could be viewed repeatedly, if necessary, to aid in the viewer's retention of the case setting process information.

Part and parcel to the video guide was detailed information on the following key installation tasks:

- Careful and safe unloading of the refrigerated display cases from the delivery trucks.
- Close inspection of delivered cases and the supplied installation materials to determine:
 - The presence of all required case parts.
 - The presence of any damage that may have occurred during shipment.
- Meticulous consultation with the floor plan layout to ensure accurate positioning of the display cases.
- Proper use of a laser level to aid in achieving level case installation, included was the proper use of shimming under the case "feet" for spot leveling.
- Accurate positioning of adjacent cases, including all aspects involved in proper case-to-case application of insulation (foam tape) and sealing materials (butyl).
- Final trim out of cases with supplied accessories (bumpers, trim).
- Final inspection of the external case appearance with respect to fit, finish, and satisfactory alignment.

Training sessions for installers and contractors utilizing the video guide consisted of two parts:

1. Session 1 (morning) ... viewing of the video guide.
2. Session 2 (afternoon) ... extensive hands-on instruction and interactive demonstration of the complete and competent performance of all necessary case installation steps. Students were also given the opportunity to physically perform the required actions and to ask any pertinent questions they might have.

MANDATORY Accountability was integrated into the training regimen through the creation of a "certification program" for participants. In order to become certified to perform display case installation for Publix, each individual participant is required to satisfactorily pass a comprehensive examination given at the conclusion of the course.

The successful implementation of the training program has only been the beginning. From the onset, the vision of the Publix and Hillphoenix partnership has focused on creating the most extensive field training program in the retail grocery business. The essential idea has always been to work to grow this training program into a lasting and meaningful contractor certification plan. Thus far, through the course of numerous training sessions conducted to date, significant efficiency and quality gains via reductions in time to perform and complete case-setting tasks properly has proven the program's value. The execution of a number of post-training supermarket installation projects has validated the program's efficacy. Buoyed by the initial success of the joint training program, the Hillphoenix/Publix team has continued working together to expand the offerings to include additional technician skills. The

intent is to utilize these initial efforts as a stepping-stone to create a much broader training/certification program. A key ingredient to the success of the program has been the unwavering full support of both Hillphoenix and Publix corporate management. The Hillphoenix/Publix partnership for training excellence is currently in its initial year of a planned three-year course and certification program. Training offerings created and conducted so far in 2019 as part of the program include:

- Installation of Refrigerated Display Cases
- Recommissioning and Operation Standards for Secondary Glycol Cooling Systems
- Operation of Low-Temperature CO₂ Cascade Cooling Systems

To date, a number of regional (across the five Publix regions in the Southeast) training sessions have been conducted, all requiring the mandatory attendance of both Publix and contractor employees. Every class held has successfully utilized a combination of both classroom instruction, video demonstration, and hands-on student participation to attain a complete training experience for the attending participants. Feedback has been highly positive and encouraging from both students and the two companies.

As part of its role in the partnership, Hillphoenix manages both the tracking of course attendance and the conduct of participant testing to determine the level of individual employee certification. Both Publix and contractor employees are required to demonstrate that they meet pre-determined levels of competency (test percentage and skills demonstration) prior to advancing to the next level of training. Hillphoenix then generates individual course completion certificates for the courses, as well as updates the roster of completed courses for each employee as they earn the various levels of certification for technical refrigeration work.

So, what's next on the docket for the training initiative? As the program continues to mature, multiple levels of contractor certification are foreseen, based on a structured curriculum consisting of groupings of course offerings with each grouping having a central work task theme (e.g., Installation, Secondary Glycol Cooling System Operation, Low-Temperature CO₂ Cascade Cooling System Operation, etc.). Different certification levels (Platinum, Gold, and Bronze) will be assigned based upon each individual's successful completion of the varying levels of coursework, as well as satisfactory performance on conducted testing.



The ultimate goal of this cooperative training effort is to facilitate the improvement of the operation, efficiency, and reliability of Publix refrigeration systems. There are, however, many corollary benefits to all parties involved. None the least of these would be the fact that Hillphoenix and Publix both aspire to spend their precious time and resources on productive, value-added activities rather than chasing down the gremlins introduced by a flawed installation.

Hillphoenix and Publix have put skilled refrigeration technician availability square in their sights. And the ultimate driver of all this activity? Well that takes us back to where we started with all of this — “You’re only as good as the people that surround you”. Hillphoenix and Publix “get it” ... and they are doing something about it!