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- **Service Truck Inventory Control**
- **The Power of High-Performance Service Agreements**
- **Key Performance Indicators: Measure, Don't Guess**

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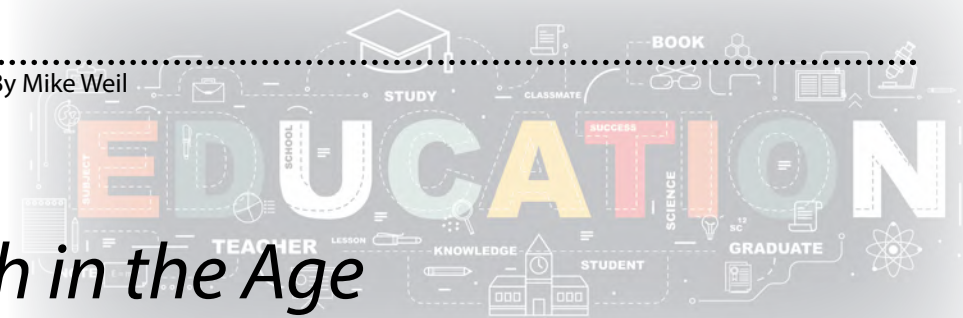
KPIs: If You Don't Measure, You're Just Guessing

At Lakeside Service Co., key performance indicators keep John Boylan's management informed and its personnel motivated.

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Keeping the Faith in the Age of Unintended Consequences



Mike Weil is editor-in-chief and director of communications and publications at National Comfort Institute, Inc. Contact him at ncilink.com/ContactMe.

It is said that there are nine words that form the most terrifying sentence in the English language: “*I’m from the government and I’m here to help.*” This political humor is based on the reality of what is known as the fallout from unintended consequences.

The consequences of government regulation often negatively impact businesses in the process of trying to help the masses. One of the biggest is the continual push led by federal dollars to educate our children via four-year colleges versus trade schools.

In February 2024, National Comfort Institute CEO Dominick Guarino wrote a column about how it’s time for the HVAC Industry to get serious about **rebuilding our workforce**. He explains the problems and makes suggestions about what we can do to better support a stronger push for younger people to consider the trades as careers.

“The real challenge is increasing awareness of the great opportunities in HVACR. What’s truly unique about our industry is the variety of knowledge that is needed,” he wrote.

The problem, as I see it, is that this is an uphill battle. Today most high-school counselors still emphasize how four-year colleges are the key to future success and rarely talk about the careers and income students can earn working in the trades. They don’t address how the trades can help students avoid the crazy debt they’ll accumulate going to college.

I saw an interesting podcast recently where Glen Beck interviewed Mike Rowe about the issue of unintended consequences. The interview is called, **“This ‘MIND-BOGGLING’ Attack on Freelancing Has Mike Rowe Sounding the Alarm.”**

During that discussion, Beck and Rowe talk about a federal “act” called **The Labor Pro Act**

that is intended to protect the gig economy (Uber and Lift Drivers) from being denied access to benefits and protections received by those who work for companies.

The intention is good, but like all government proclamations, it is open to interpretation. The ideas behind it are spreading beyond their intent; thus Rowe’s concern for freelance writers, graphics designers, and small, independent businesses.


Rowe says, “The idea is to protect the masses from failure. RISK is a four-letter word and failure is not acceptable. Yet, the greater the risk the greater the reward. Is the government trying to change that? Not intentionally.”

He adds that this thinking strengthens the idea behind needing college over trade school.

“Why can’t all the options be laid out on the table and let the grown-ups decide what fits best?” Rowe asks.

Tradespeople like High-Performance HVAC™ contractors do very well financially. We know that. It requires hard work and continuous education. More importantly, to attract more young people into this area, it requires young people who are successful in the trades today to tell their success stories. Such storytellers need to be from the right generation.

As Rowe says, “This country needs persuasive voices talking in a credible way about the value of all forms of education. It is critical we don’t ignore the part of our workforce that keeps the lights on, the water clean, and our buildings comfortable and safe.”

I couldn’t agree more. Let’s bypass the unintended consequences, keep the faith, and find those young people to tell their stories. If you have such people working for you, we’d love to help them share. Please reach out to me at ncilink.com/ContactMe. 

Written by HVAC Professionals for HVAC Professionals

Sauermann Si CD3 Gas Leak detector

I've had my fair share of leak detectors, but they haven't come close to the **Sauermann Si CD3**. Most leak detectors use audio and visual (a colored scale) indicators to pinpoint gas and refrigerant leaks.

The Sauermann Si CD3 is a smaller handheld detector with a flexible stainless steel probe measuring 13 inches. It requires four AAA batteries, which should last for 20 hours.

The Si CD3 also has a backlight function and an audible alarm to notify the user of a gas leak.

The best part about this instrument is its parts per million display. Unlike many other gas leak detectors, this one shows parts per million starting at one PPM and

going up to 10,000 PPM. I love this because it adds more confidence when the detector goes off.

Additional screen display features include **% LEL** (Lower explosive limits) and **% VOL** (the percentage of air volume).

Sauermann states that this instrument can detect most combustible gas. I have tested the Si CD3 on refrigerant, propane, natural gas, car exhaust, cigarette smoke, and methane! Don't ask how I tested that last one! The Si CD3 detected all of them.


Oh, one more thing: Sauermann calibrates, adjusts, and maintains their instruments to guarantee a constant level of measurement quality. They recommend an annual checkup to make sure the Si CD3 is totally accurate.

If you're in the market for a new gas



leak detector, I highly recommend you try out the Sauermann Si CD3. You won't regret it.

For more information on **Sauermann's Si CD3 gas leak detectors**, visit ncilink.com/sicd3.

— Casey Contreras, NCI Instructor 

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Arzel Zoning
TECHNOLOGY

Service Truck Inventory Control *Increases Your Billable Hours*

A well-stocked HVAC service truck can make all the difference between a smooth operation and frequent set-backs. For years, we tried to get our arms wrapped around the most efficient and beneficial way to keep tabs on the inventory of our service and installation trucks. We struggled with this for a long time.



Using R.E. Michel's ESP Inventory Management System, Kennihan Plumbing and Heating has seen real growth in their billable service hours.

One of our best moves was to partner with our distributor — the [R.E. Michel Co.](#) — for inventory management. Their proprietary inventory software — ESP — has helped our technicians be more productive. In fact, with R.E. Michel's help, our efficiencies increased to the point that we get one extra call per day per tech!

When we opted into the [ESP Inventory Management Solution](#), R.E. Michel helped

us go through one of our service trucks to inventory it correctly and enter it into ESP. After that, we added all our HVAC trucks to it.

Now, when my guys are out on a service call and use a stock item from their truck — like a capacitor — they press a button on the mobile app, which deletes the item from the truck inventory, then flags our management team to reorder that part from R.E. Michel, who delivers that part back to us the next day.

We have a bin in our dock area for each HVAC truck, and R.E. Michel puts the replacement inventory in each bin. There's no excuse for not having that or any part in that truck.

In addition, my techs no longer waste time driving to the distributor to get parts, increasing their time efficiencies and productivity.

WHY TRUCK INVENTORY MANAGEMENT IS VITAL

Though this setup is specific to R.E. Michel, many systems are out there to help you manage truck inventory. If you are currently eyeballing it or leaving it up to the techs, you open the door to wasted time, which costs you money.

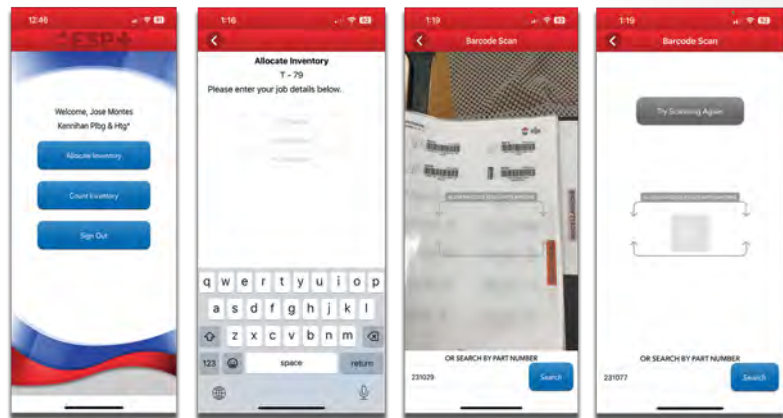
I think the worst thing a technician can say to a customer is that they don't have a part and will have to come back. That opens the door for an unhappy customer who may decide to use a different company next time.

Nobody wants to lose a customer like that when it can be easily avoided by having a truck inventory control system.

Here are a few reasons why truck inventory management is so important:

- **Efficiency:** A properly stocked service truck ensures technicians have the necessary parts and tools readily available, reducing downtime and

Kennihan Plumbing and Heating TRUCK INVENTORY MANAGEMENT



increasing efficiency.

- **Customer Satisfaction:** Time-ly repairs and installations are crucial for customer satisfaction. The right inventory enables technicians to complete jobs promptly and effectively.

- **Cost Effectiveness:** Avoiding unnecessary trips to suppliers saves both time and money. With proper inventory management, you can minimize overhead costs associated with emergency orders and rush deliveries.

I believe inventory management makes decision-making on many levels a lot easier. It enables us to dispatch the right tech to a job and not worry that they might not have what they need to finish it. Inventory management helps us make purchase decisions. It helps us measure productivity.

THINGS DON'T ALWAYS GO AS PLANNED

We all know that not every job every day goes as planned. In those cases where a tech doesn't have the right part or tool on their truck, we do have a plan B.

Depending on where the technician is and how soon they need that part, one of our managers will jump in a truck, get it from the distributor, and deliver it to that technician.

Before truck inventory management, we used to have several "parts runners" going back and forth from jobs to the distributor. Since we don't need as many runners now, we took those people and trained them into maintenance techs or even service techs over time.

WHAT WE LEARNED

By going through this process — again, with the help of R.E. Michel —

here is what we learned regarding the steps necessary to get an inventory management system in place:

- **Assess Your Needs:** This means thoroughly assessing your typical service calls and maintenance tasks to identify the most frequently used parts and tools. You should write it down. Then, decide how many items must be stocked on the truck based on the season. We did this by going back two or three years and looking at what we used the most in the heating and cooling season.

- **Create an Inventory Checklist:** Based on what we discovered in our assessment, we developed a comprehensive inventory checklist, including essential parts, tools, and consumables per truck. Categorize items based on their frequency of use and criticality for day-to-day operations. Another thing: we took an extra step and asked the techs themselves what they wanted in the truck that we may have missed.

- **Establish Replenishment Procedures:** This is where R.E. Michel's ESP program shines. If you aren't using ESP, you should set up a system for monitoring inventory levels and reordering supplies when stock reaches predetermined levels. You can use inventory management software or manual tracking methods to keep accurate records of usage and

replenishment needs.

- **Organize Each Service Truck:** Optimize the layout of your service truck to maximize space and accessibility. We try to store frequently used items in easily accessible compartments or shelves while storing less frequently used items in secondary storage areas.

- **Create a Quality Control Process:** This isn't as difficult as it may sound. It means your tech or service manager regularly checks inventory for damage, expiration dates (if applicable), and overall condition. We learned that it's important to rotate stock to ensure we use older items first, reducing waste.

- **Training and Communication:** You should train technicians on best inventory management practices and maintaining a well-stocked service truck. Your distributor may be able to help with this. Encourage open communication between technicians and management regarding inventory needs and any challenges encountered in the field.

HIGH-PERFORMANCE HVAC TOOLS AND INSTRUMENTS

Our field service and installation teams measure static pressure and system performance on every call. We follow the standards taught by National Comfort Institute (NCI), and



equip them with the tools necessary to succeed. With that in mind, here is what we want on every truck:

- **NCI analyzer kit** that includes a Testo digital static pressure manometer, probes, test port installation kit, and test port plugs
- For air conditioning, they need solid **electronic charging gauges**. I've found that most of these work well, so I let the techs choose and buy the ones they prefer
- **Water pressure gauges**: We provide this so they can check water heaters and boilers.

We love the NCI kit as well as all the training that NCI provides.


The training and tools we've acquired from NCI truly helped me and my team turn the business around.

MEASURING SUCCESS

One last thought: by controlling our truck inventory, we could change how we stage jobs each morning. With R.E. Michel's ESP, we can get our HVAC techs in by 7 a.m. and out by 8, then bring in our plumbing techs. Before understanding the inventory of trucks, we tried to stage everything together, and it was complete madness.

As I stated at the beginning of this article, one of the most significant benefits of truck inventory management is that we've improved productivity so much that we can get one extra job per tech per day. We measure success by using billable hours as a key performance indicator. And we are seeing that number increase.

Maintaining proper HVAC service

truck inventory is essential for optimizing efficiency, enhancing customer satisfaction, and controlling costs in the HVAC service industry. I believe that if you follow the guidelines outlined here and regularly evaluate and adjust your inventory management practices, you can ensure your service team is equipped to handle any job that comes their way. 



Bill Kennihan owns Kennihan Plumbing and Heating in Valencia, PA. The company is considered an energy specialist in their marketing area. High-Performance testing is a cornerstone of their business. Contact Bill

at ncilink.com/ContactMe.



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 April 9: Denver, CO
 April 9: Hartford, CT
 April 9: Houston, TX
 April 9: Landover, MD
 April 16: Charlotte, NC
 April 17: Raleigh, NC
 April 30: Louisville, KY

Residential HVAC System Performance and Air Balancing Certification Bundle

April 16-18: Lewisville, TX
 April 16-18: Kissimmee, FL
 May 7-9: Austin, TX
 May 21-23: Roswell, GA

Duct System Optimization and Residential Air Balancing Certification Program

April 16-18: Austin, TX
 April 16-18: Utica, NY
 May 14-16: Lansing, MI

PUBLIC LIVE TRAINING (cont.)

Duct System Optimization Certification Program

April 3-4: Pittsburgh, PA
 April 10-11: Denver, CO
 April 10-11: Hartford, CT
 April 10-11: Houston, TX
 April 10-11: Landover, MD
 May 1-2: Louisville, KY

Commercial System Performance

April 23-24: Livonia, MI

Commercial Air Balancing Certification Program

May 21-23: Louisville, KY

PUBLIC ONLINE LIVE TRAINING

Residential Air-side Recertification - ONLINE LIVE

April 9-10

Combustion Performance and Carbon Monoxide Safety Recertification Program - ONLINE LIVE

Apr 23-24

Duct System Optimization Certification Program - ONLINE LIVE

April 30 - May 1: Part 1
 May 7-8: Part 2

Refrigerant-Side Performance Training Program

May 14-15: Part 1
 May 21-22: Part 2

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Test and Certify Ventilation Systems and Economizers Certification Program

April 2-3: Anaheim, CA

Commercial System Performance

April 16-17: Anaheim, CA
 May 29-30: Tulare, CA

Refrigerant-Side Performance

April 24-25: Tulare, CA

Airflow Testing and Diagnostics

May 7: Anaheim, CA

Airflow Testing and Diagnostics Implementation Workshop

May 8-9: Anaheim, CA

Duct System Optimization and Residential Air Balancing Certification Program

May 14-15: Anaheim, CA

**TECH CLEAN CALIFORNIA TRAINING

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Residential HVAC System Performance and Electrification

April 2-4: Hayward, CA
 April 30 - May 2: Anaheim, CA

High-Performance HVAC Design and Redesign for Electrification

May 15-17: Hayward, CA



* NCI training sponsored/subsidized by Southern California Edison (SCE) for qualified local contractors. ** NCI training sponsored by TECH Clean California for qualified local contractors.

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The Power of High-Performance Service Agreements

Delivering optimal performance for HVAC systems involves more than just routine maintenance tasks like filter replacement and unit cleaning. My understanding of the significance of system testing and measurement began during my Air Force tenure, where I worked on industrial air conditioning and refrigeration systems.

Upon transitioning from the military, I pursued my career in the HVAC industry, continually expanding my knowledge through testing and learning. In March 2016, I established my own company, [Accurate Heating and Air Conditioning](#), in Lompoc, CA. From the outset, we incorporated system performance diagnostics into our service agreements.

SOME HISTORY

In October 2016, I became a member of the National Comfort Institute (NCI) to further my



Our team takes immense pride in their work. The numerous photos we share on LinkedIn and other social platforms often elicit comments. This leads me to wonder why other contractors don't do the same.

understanding of combustion, carbon monoxide, and system performance. My education in performance testing of duct systems originated from my industrial experience. Measuring static pressure is essential; without it, system adjustment would be impossible.

My engagement with high-performance diagnostics, albeit not at the NCI level, spans over two and a half decades. This involves measuring static pressure, verifying proper duct system sizing, and ensuring the system operates within optimal cooling design parameters. Any static pressures exceeding the manufacturer's recommendations immediately raise a red flag for us.

Local competitors often shy away from working on duct systems, viewing it as too challenging. They prefer easy sales, installing a furnace to the old tin ductwork with asbestos wrap, rather than crawling around in an attic and running flex.

High-performance diagnostics form an integral part of our standard service agreement checklist. Our technicians are required to check the static pressure, perform the sealed combustion test, record the parts per million readings, and note the oxygen levels. All these checks are incorporated into our Service Titan system, allowing us to monitor these tests.

Furthermore, our technicians capture screenshots of their analyzer showing measured results and include them with their checklist entries.

OUR COMMITMENT

Diagnostic testing is a non-negotiable part of our maintenance and service agreements. It's ingrained in our culture. If a technician is uncomfortable with this, they might find other companies more suitable.

I am uncompromising when it comes to our

operations and processes. This approach drives my business and generates leads. We enhance home safety and comfort using high-performance diagnostics. It's as simple as that. Consequently, we frequently replace ducts.

THE CHALLENGE

Educating our marketplace presents more challenges than educating our team. Most consumers perceive their furnace as the heating system, unaware of the duct system's importance. It's my responsibility to enlighten them.

As Rob Falke from NCI used to say, installing a highly efficient furnace or air conditioning unit on a substandard duct system will likely exacerbate issues, not improve them.

At Accurate Heating, we always inform customers that while Company B could install a 90% furnace on their existing duct system, we could install an 80% furnace with a new duct system, and our system would outperform the competitor's.

Our approach is to be candid with customers. Interestingly, I don't provide estimates on the same call. I don't even discuss price with customers during the sales call. The role of my sales team and me is to educate customers on why we are their best choice.

We seldom initiate cold calls. Instead, our clients reach out to us when their comfort systems malfunction or are deemed unfit by the gas company. If we find the duct system is in a state of disrepair and falls short of our standards during our visit, we refrain from replacing their furnace unless they agree to a duct replacement.

I'm not irrational, but rather self-



assured. I take personal responsibility for every task I undertake, signing my name to each job. If a new installation doesn't meet the standards I've established for my company, I won't proceed with it. My name and reputation are on the line.

Some may argue that I'm foregoing potential revenue. However, I see it differently. The subsequent job will likely encompass a comprehensive task, and that's where I'll generate profit.

SERVICE/MAINTENANCE AGREEMENT SALES

Our confidence should not be mistaken for arrogance. We refrain from discussing our competitors. Instead, our attention is centered on the existing system, our proposed solutions, and our methodology to address homeowners' issues. We present options and empower customers to make their own decisions.

Our strategy is to demonstrate our team's expertise by conducting mea-

surements, elucidating the results, and proposing alternatives. There's no need to mention competitors as customers can discern the difference themselves. From a sales perspective, when it's time for me to depart, the customer typically inquires about the cost and the commencement date for the work.

The subsequent step is follow-up, which is as crucial as testing and measuring during the call. At Accurate Heating, we ensure our technicians fulfill their responsibilities through our Service Titan program. Service Titan features built-in checklists for all maintenance and service calls, and I have also devised a follow-up form.

If a technician identifies any follow-up requirements, they complete this form, attach relevant photos, and provide a description. Service Titan then notifies our office team via email, stating, "Jose has completed a follow-up form for this customer," and flags it on the dispatch board. This system prevents us from missing

opportunities due to busyness.

The significance of this action cannot be overstated. It conveys to the customer that we care enough to follow up and helps us seize additional opportunities. What better way to demonstrate to the customer that we are the right company? We uphold transparency and honesty in all our dealings and possess the integrity to stand behind our work.

LEVERAGING TECHNOLOGY

In today's world, technology has become an indispensable asset in managing service calls, maintenance tasks, and business operations. Service Titan is instrumental in facilitating the latter. I emphasize to my technicians the importance of investing in the right tools and instruments that offer valuable feedback. Many of our team members utilize Testo instruments, while others prefer Fieldpiece.

However, my focus has shifted from purchasing numerous test instruments to acquiring more construction equipment to simplify tasks for the team. Nevertheless, the role of technology in streamlining work cannot be overstated. The convenience of having maintenance checklists on mobile devices is immense, and the transition from manual note-taking to digital record-keeping helps mitigate clerical errors.

Moreover, digital instruments allow us to upload data to cloud-based servers for storage and retrieval. This not only serves as a backup, but also facilitates remote troubleshooting of complex issues. I can delve into the problem and decipher the underlying cause, which is quite remarkable.

The landscape of our industry is

continually evolving, with daily advancements in technology, equipment, and refrigerants. Grasping the workings of modern circuit boards and mastering their troubleshooting is essential. This necessitates ongoing education, training, and practice to stay abreast of these changes.

“If one chooses to be an HVAC contractor, shouldn't the aim be to excel in the field?”

KEEP UP WITH TRAINING

Maintaining an NCI membership and ensuring my field service and installation team receive training from them is a crucial strategy for us to stay abreast of high-performance diagnostics. We also send our team to other providers to keep pace with evolving technologies. I personally participate in jobs to collaborate with my team – this is all part of conducting business.

If one chooses to be an HVAC contractor, shouldn't the aim be to excel in the field?

This philosophy guides my life. I made a commitment to myself long ago that I would not only be part of the HVAC industry, but also strive to be the best technician I could be. My personal best. I'm not benchmarking myself against others, but against my own potential.


After all, as individuals, our goal should be to continually strive for improvement. Consider this analogy: doctors are committed to the ongoing practice of medicine. Similarly, we should be dedicated to the continuous practice of HVAC.

ACCURACY AND PRIDE MAKE THE DIFFERENCE

Our team takes immense pride in their work. The numerous photos we share on LinkedIn and other social platforms often elicit comments. This leads me to wonder why other contractors don't do the same. Perhaps they haven't considered it, or they prefer to keep their work private. We, on the other hand, are passionate about our work and eager to showcase it to the world!

Our company operates under the motto, “Fast is Fine, but Accuracy is Everything.” If you can't proudly attach your name to your work, then it's an indication that the job wasn't done well enough.

With this in mind, my counsel to other contractors is to unequivocally back their product. Regardless of whether it's an installation or maintenance task, standing behind your work is crucial. You must embody the principles you advocate. Over-promising and under-delivering is a strategy that will deter customers from returning.

Furthermore, if you're not incorporating high-performance diagnostics at any level, you're likely overlooking at least 50% of potential revenue opportunities, if not more. 

Ron Mathias owns
Accurate Heating and

AC in Lompoc, CA. This \$1.9 million residential/commercial HVAC company specializes in High-Performance HVAC™ contracting and has since opening day in March 2016.

He has been in the HVAC trade since he was 18 years old. If you have questions about including performance diagnostics in your service/maintenance agreements, contact him at ncilink.com/ContactMe.



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System Performance Means Selling Solutions, Not Boxes

Just as it's happening in the rest of the world, the average home in Houston, Texas is changing, along with our weather and power infrastructure. Across America, people are staying in their homes longer than at any other time in history.

They are facing many indoor challenges. The need for a healthy indoor environment, especially after the pandemic, became immediately noticeable. This means that it's essential for the inside of a home to be a healthy space to not just sleep or relax but have full lives.

In all fields of building science, upgrades will always be needed as changes come and progress is made. The HVAC industry has never been the exception. The need for systems designed to meet the new challenges that come with this transition is obvious.

IT'S NOT MAGIC

This is not achieved by magic, and at [Crossway Mechanical](#), we've come to understand that the modern HVAC contractor needs to have



Customer Michael Nichley says of Crossway, "Their approach was the most detailed and scientific process I have ever seen with any contracting firm."

a very elastic mind. With new technology come new subjects to learn and new skills to master.

Think how far we've come: HVAC technicians of the 1980s never dreamed that they'd need basic computer know-how to diagnose the new communicating systems preferred by many homeowners today.

To make things a bit more interesting, modern tools to simplify diagnosing not just equipment, but also air delivery systems, each have their own learning curves.

Today, the number of our tools with a mobile app interface is increasing. And nearly every mobile app is like a person, with a whole set of idiosyncrasies to remember for each of them. For example, some such apps are available for:

- iManifold
- Fieldpiece
- Resideo
- CoolCloudHVAC
- PT PRO
- BluVac, and more.

It's necessary that every serious technician who wants to provide good service become familiar with each one of them.

THE IMPACT ON HIGH-PERFORMANCE SALES

How does that come into play with the selling of high-performance residential and commercial HVAC system upgrades?

Our philosophy, as stated by Crossway Mechanical Owner Brian Wright, is to "*sell yourself, your brand, your image, before you sell the product.*" Equipment brands will change. Consolidation of manufacturing brands can make it challenging for a homeowner to inherently trust just a brand name.



It is better for them to have an expert whose opinion they can trust. One whose job is to be informed about what system will work best for each homeowner and who knows best how to troubleshoot and maintain those systems. That includes everyone on the team: not only must our installers be properly acquainted with the system they install, but the service technicians must keep those systems just as close to their hearts.

CONFIDENCE IS VITAL

Your confidence, not just on the quality of the system you sell, but on the quality of your expertise and your work, will be the principal closer of any system performance sale.

In an article [written for this magazine](#), we shared how our confidence enabled us to help a homeowner solve complex issues they faced when upgrading their home. It was not easy, and **it was not cheap.**

What made them choose Crossway? What closed the sale? Was it the brand of the equipment we were selling, or was it our own brand? In the homeowner's own words:

"Their approach was the most detailed and scientific process I have

ever seen with any contracting firm. They listened to what we wanted, they went over my options with me, and even made allowances in their calculations for the new windows and attic insulation I was planning to install." — **Michael Nichley**, homeowner.

Facing such challenges for upgrading systems is possible due to understanding that investing time and resources to educate oneself for the new

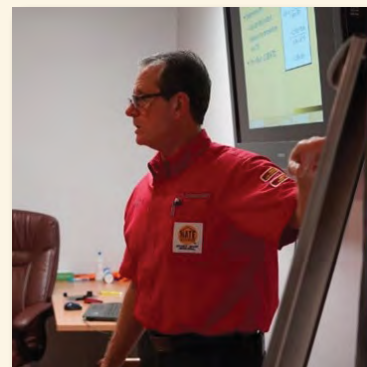
quality of the installation. What good is a higher-efficiency system if the installation limits its ability to deliver air?

Our mission is to take the lead in precisely that department. That training and education involves a lot, from having our team certified in as many skills as we can afford, then having them apply the theory in the field.

As systems become more complex, the installation practices become more specific and stricter, with the margin for error becoming narrower as the

"We recognize how system upgrades involve more than the machinery. It involves the whole comfort delivery system, and it requires knowledgeable trained installers AND technicians to ensure that the entire delivery system is just as high-quality and up to date as the machinery that's available today."

— *David Small, Crossway Mechanical's educational department leader.*



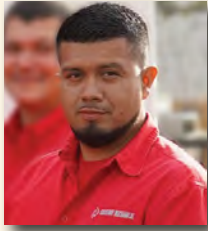
field standards, products, tools, and practices is not just an optional advantage — **it's a must.**

THE QUALITY FACTOR

A system is not just upgraded by the quality of the equipment, but by the

system needs to work in harmony with the rest of the home's ventilation and envelope.

When it comes to the installation, it's non-negotiable to implement a disciplined quality-control regimen to ensure the system will be installed



"We can stand behind our price because we can stand behind our work. We CAN and ALWAYS DO ensure the system installation meets manufacturer specifications, and the job is never done until this is accomplished."

— Jose Marban, lead service tech at Crossway Mechanical

properly and work according to specifications. Unfortunately, this task has evidently proved challenging for many contractors. We theorize that one of the reasons may be owed to what they prioritize: volume over quality which equates to lower pricing.

TIME INVESTMENT IS NECESSARY

This approach to new system upgrades means longer periods of time, man hours and resources, spent on ONE house. As you will surmise, our quality control is reflected in our *flat-*

rate pricing. It is our professional opinion that lowering your original price at the customer's request will prove to be both a disservice to your company AND to future homeowners.

To our homeowners, our guarantee is that they will not regret paying a higher price for higher quality work, whether that is with us or with any other contractor they trust. To our fellow contractors, our guarantee is that you will not regret investing in the quality of your work, your level of education, and your competence as

a licensed HVAC contractor in these transitional times.

For Crossway, beyond the system upgrade itself, our customers have benefited from our reliable solutions to their real-world problems. State-of-the-art systems need state-of-the-art installers and practices.

That is how we have been able to meet all the new challenges involved with today's new homes. **NCI**



Axel Romero is a service technician at [Crossway Mechanical](#) in Tomball, TX. Before that he worked at Air Analyst owned by [David Small](#). He has been in the HVAC industry since 2017 doing not just in service, but also mold remediation work. He can be contacted at ncilink.com/ContactMe.



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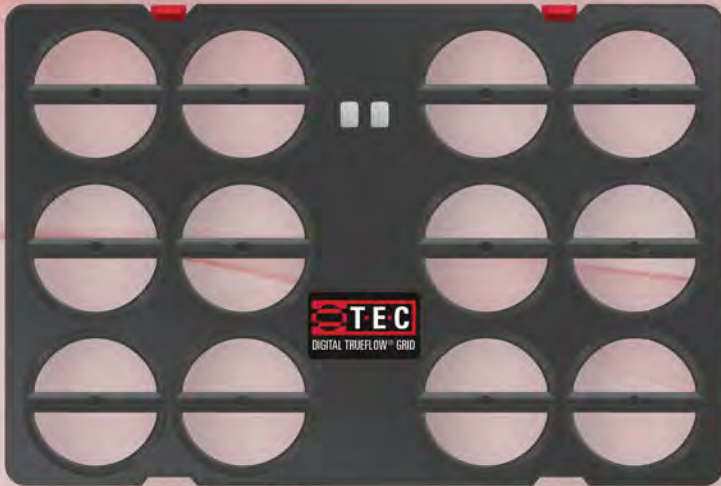
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KPIs: If You Don't Measure, You're Just Guessing

At Lakeside Service, we are students of the concepts behind High-Performance HVAC™ Contracting. And though we are a work in progress, the goal is to test and measure as many of the systems we encounter in the field as possible.

Are we there yet? No. But we are setting the groundwork for that by creating processes and procedures within our company to measure how we are doing.

Management Consultant Peter Drucker famously said, “*What gets measured gets done.*” In management speak, such measurements are called Key Performance Indicators or KPIs.

For me, KPIs are a tool to measure progress toward intended results. But this can be tricky because there are many different things to measure, and I struggled to know what was most important.



During a typical Lakeside Service meeting, managers go over “The Score Card” and discuss with the team goals, suggested improvements, and ask for suggestions.

JUST GET STARTED

The worst thing you can do is procrastinate getting started. We’ve been using KPIs since 2013, but it took bringing coaches from National Comfort Institute (NCI) to help us implement them into our everyday business.

When John Garofalo became our mentor, he showed us the value of KPIs and helped us implement them. It was through NCI that we first heard and understood the phrase, “*If you don’t measure, you’re just guessing™.*”

Today, we use KPIs for everything from determining career paths for our technicians to creating fair ways to pay different levels of technician skills, tracking our costs, and so much more.

With John’s help, we determined what to measure and how to keep track of it. We also learned to overcome our mindset of keeping numbers close to the vest – we had to share numbers so everyone knew the score.

SO, WHAT SHOULD YOU MEASURE?

Reading Peter Ducker or listening to numerous management videos on YouTube and elsewhere teaches you that nearly anything can be measured. Typically, from a business perspective, the experts recommend focusing on:

- Revenue and Profit Metrics
- Customer Satisfaction Metrics
- Operational Efficiency Metrics
- Service Agreement Performance
- Safety and Compliance Metrics
- Technician Performance
- Inventory and Supply Chain Metrics
- Environmental Metrics
- Benchmarking and Continuous Improvement Metrics.

Under each of these bullets are many individual indicators you can target.

It was super important for me to **keep things very simple at first**. For example, in the beginning, we only picked five KPIs per department. We didn’t want to have super granular information. That makes it hard to keep things objective.

A QUICK CASE STUDY

At Lakeside, we expect all our technicians to sell to some degree. Some are better salespeople. Others have better technical skills. No two people are the same.

The KPIs need to make sense to each team member and still have value from a management standpoint.

We learned not to put too much weight on categories like sales and average invoices because guys who sell tons of stuff with the highest average tickets are often simply better salespeople. The bad news is they usually have the highest number of callbacks.

Then you have technical guys who don't sell as much but have almost no recalls because they're wizards with technology.

It's easy to compensate people for sales. You build a spiff into it. But how do you do that for guys with lower sales and no callbacks?

These techs are who we typically send out to fix the work of the selling techs. That has a genuine value. This unbillable work is vital to keeping customers satisfied.

So, we settled on the idea of tracking total billable and unbillable calls.

Now, how do we pay the guys? Top sellers love the spiffs. Low callback techs don't care about spiffs. They want good pay. So, we pay them slightly better than the selling techs.

The downside is that we're now paying someone in the top bracket to do unbillable work.

That pressures the leader to be a better coach and mentor. It's on us as managers and leaders to limit the callbacks and cut back on lost revenues associated with them.

This is a delicate balancing act that



we are still perfecting. The key is in the numbers' accuracy and how we share those numbers with the team.

KNOWING THE SCORE

This is why measuring and tracking KPIs isn't enough. You must share the data so your team knows where they stand. I like to call that "knowing the score." We share the data using a combination of whiteboards posted in public areas and using electronics via our Service Titan business management software, which shares individual scores via email. For big team scores, we used digital monitors because updating required to track things on a whiteboard manually was too time-consuming.

But we're moving back to whiteboards. There's something about the tangibility of hanging them on the wall. That is what NCI's John Garofalo taught us to do during his years of mentoring.

Here's the challenge: the numbers must be accurate. You can't just haphazardly publish numbers because once you start publishing and posting them for all to see, people get very focused on the accuracy of their numbers. So, you must be able to stand behind the numbers.

This process requires a cultural change that can be both difficult and

rewarding. It also evolves and changes over time because as your team changes by bringing in new people, you get a new set of challenges. Each generation seems to bring a new set of skills and challenges with them.

At Lakeside Service, we've been using KPIs for so long that they are part of our culture. In fact, if we aren't providing KPI feedback, techs will let us know and hold leadership accountable.

KPIs have become fuel for performance, and the newer team members need the correct support to get on board. Often, their experience with other employers was to be criticized for underperforming. We plunge them into a supportive team environment long enough for them to realize the benefits.

As long as the team encourages them to succeed, they eventually bloom into the performers they were intended to be. Ultimately, it comes down to management and how we use the information.

Do we see problems or opportunities? Team members respond to our behavior as leaders and managers more than anything.

KPI AND CAREER PATH CREATION

Key Performance Indicators are not just for management to track how well the business and techs perform. They



also are great tools for creating career paths. For example, we have a manager who is so good technically that he can often help techs in the field diagnose problems over the phone.

As a manager, he needs his team to sell more agreement add-ons and get more sales leads. But sales are NOT in his wheelhouse.

To help, we created a new position, taking the top-selling technician in our service department and making him a coach to mentor people. We did the same thing with our top technical technician. We knew who these guys were because of the KPIs we track.

We gave them each a small bump in pay, and they coached and mentored a team of four people.

The four techs in each group need the most help presenting things, communicating with customers, and selling. We pair them with the top-selling tech who helps them improve. The mentor shares his knowledge with these young guys and can help them

all day, even after hours. Talk about building camaraderie!

He has a 30-minute weekly meeting with them to review challenges and successes. He celebrates their success stories. The same thing happens with our technical mentor and his group of four. By doing this, our service manager can focus more on some bigger departmental stuff.

Everyone is compensated based on their strengths. Our highly technical technicians are in a different pay bracket than our average technical technicians, who may be good at selling agreements, add-on accessories, and other sales. Selling techs make a lot of money from spiffs.

Ultimately, they all fall into the same total pay, but they're compensated based on strengths and what they provide to Lakeside.

BALANCING ACT

In hindsight, it's not that hard to set career KPIs up. But it is hard to change

the way we think about how everyone needs to be paid the same. You must create an environment where it's OK to be a Type A or a Type B personality. That environment must include a path for financial success for both.

The key for us is balance. We always work to keep things balanced. You can't ignore maintenance agreements because you're a good technician. You still have to offer them. But we won't judge you based on the percentage of conversions you make.

We will hold you accountable for the number of callbacks you have.

We achieve balance using a matrix we create that includes different tasks, skills, and proficiencies. When a tech masters them, they fall into a category where their pay increases.

Management knows where all our techs stand on this skillset matrix. We don't send them out on difficult jobs if they are not as advanced.

KPIs, then, are both a management and a career path tool.

In the end, our business is a people business. I'm not just talking about customers but also team members. It's about a high-performance culture focused on clear career paths. From the beginning, when we onboard and acclimate new people from a technical school, another HVAC company, or even an unrelated field, we sit down and show them our career matrix. They can see the trajectory of how they can get to where they want to go.

It comes down to KPIs.

We even created a booklet showing people what their Lakeside career can look like. It includes the requirements for advancement, the training they will need, the certifications they should earn, and more. If you don't

have a way for employees to know where they are and pick a path for their future, they may not last all that long with your company.

PAPERWORK IS A THING

Key Performance Indicator data collection, unfortunately, does require paperwork, especially when measuring technical proficiencies. We ask techs to complete progress reports describing what they've accomplished with and without help each day. Techs are responsible for keeping track of this, and then their team leader signs off on it. This paperwork is how we hold them accountable.

There are times when a tech doesn't want to do paperwork. We must explain to them that this is the only way to know what they are doing. If they want more money by advancing, this is the cornerstone.

From this and other paperwork, we now measure things such as:

- Total calls (billable and unbillable)
- Average ticket
- Conversions to service or installation leads
- Conversions to service agreement sales
- Number of follow-ups.

That last one includes examining feedback responses like how we did on the job and what our online reviews look like.

Today, we also measure our marketing and how it impacts service leads and client referrals. From a sales standpoint, we have KPIs for:

- Number of opportunities
- Number of sales
- Total revenue
- Average Sale
- Closing efficiencies.


We also collect data on how our customer service reps (CSRs) perform. Every CSR has 25 monthly calls listened to by a third party. The third party listens for key touchpoints made on each call. We use that information to train and help our CSRs improve.

KEY PERFORMANCE INDICATORS MAKE US WINNERS

We work hard to become a High-Performance HVAC firm. How can you have a high-performance culture if you don't measure it, and how can you measure it without having KPIs?

Furthermore, KPIs are how we communicate the score and measure our strategy's effectiveness. They help us implement our mission plan. They also allow the Lakeside management team to determine if we are making good decisions and investments. Accurate KPIs are required to make course adjustments throughout the year.

Lakeside has grown yearly since we implemented KPIs and posted them in 2013. We publish everything we measure, making it tangible. We can improve on everything we measure.

If you're competitive and want to win, you must know the score and what scores matter. KPIs are a great way to do that. 



John Boylan is the general manager of Lakeside Service Company in Brighton, MI. The company specializes in designing, engineering, and installing complete comfort systems in new and existing homes. He

strongly believes in the high-performance approach to HVAC contracting and is a champion for using KPIs as a management tool. To contact John, go to ncilink.com/ContactMe.

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OUTPERFORM! Make High-Performance HVAC™ Your Secret Weapon



Changes in the HVAC industry are happening faster than ever before. Electrification, heat pumps, inverter technology, new refrigerants, and new efficiency standards are just a few of the challenges and opportunities in front of us. The key is to be prepared, proactive, and educate your team to meet the new opportunities head-on.

Join your fellow high-performance contractors at NCI's **High-Performance Summit** in Asheville, NC this September to explore ways to outperform your competition, delight your customers, and lead your marketplace as you set your priorities for 2025 and beyond.

The NCI Summit 2024 will be held from September 10-13th at the **Crowne Plaza Asheville Hotel**.

Here is a quick rundown of the sessions we have planned this year and the session leaders. Be sure to mark your calendars and [register for Summit](#) today. You should also [reserve your room](#) at the Crowne Plaza and take advantage of NCI's great room rate.

● **How to Build a High-Performance Culture in Your HVAC Business** — Presented by John Boylan, General Manager, Lakeside Service, Brighton MI

● **Anatomy of the High-Performance Sales Process** — Presented by

Dawn Mroczek, Sales Manager, GV's Heating & Air, Glenview, IL

● **High-Performance HVAC Renovations from Start to Finish** — Presented by Dustin Cole, Owner, Cole Air, Inc., Lake Charles, LA

● **How to Take Combustion Testing to the Next Level** —

Presented by NCI Instructor Mark Hunt

● **The Sweet Spot: Where Building Science and HVAC Intersect** — Presented by Rob Minnick, NCI Instructor

● **Customer Communication: Drop the Technospeak** — Presented by NCI Coach David Holt

● **Climate Resilient Heat Pump Strategies** — Presented by Ben Lipscomb, NCI Director of Engineering and Utility Programs

● **How To Solve the Top 10 Inverter Installation Issues** — Presented by Bryan Orr, President and Co-founder of Kalos Services Inc., and Host of HVAC School Podcast

● **How to Properly Design with Today's Heat Pumps** — Presented by Adam Mufich, President, A-Team Heating & Air

● **The Air Upgrade Cure: A Simple Solution to HVAC Equipment Failures** — Presented by David Richardson, NCI VP of Training

● **PerformanceTown - Take Your Testing Accuracy to the Next Level** — Taught by the NCI Instructor Team

If you are an NCI member, take advantage of not only your membership dis-

counts, but consider using some of your NCI Bucks to help offset costs. **Call 800-633-7058** and ask your representative to help you take advantage of this benefit.

Meet Mark Hunt: One of NCI's New Instructors

As we pursue our mission to teach the industry about the benefits of High-Performance HVAC™ contracting, National Comfort Institute (NCI) has been onboarding additional trainers and instructors. We are pleased to introduce you to one of them, Mark Hunt, who joined NCI in 2021.

Mark has an extensive background in the plumbing and HVAC industries. He eventually began working in the add-on/replacement marketplace and took a combustion course with NCI's **Captain CO**, Jim Davis. Hunt says that class changed the way he viewed combustion appliances forever.




Mark Hunt

NCI recently promoted Mark to a full-time technical instructor. You may have already encountered him teaching Combustion Performance and CO Safety, most recently in Monroeville, PA last month.


David Richardson, NCI's vice president of training, says "Mark has quickly become an important part of the NCI technical team. His expertise in combustion and hydronics has already helped our students who have worked with him. Plus, we've grown to love his expertise and his humor."

Please welcome Mark to National Comfort Institute. You can reach him through our contact portal at [ncilink.com/Contactme](#). 

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A common misconception in our industry is Carbon Monoxide (CO), is only a heating season issue. When we look at the evidence, nothing could be further from the truth.

Many CO incidents in homes originate from water heaters not venting properly. While the appliance may not be the actual cause, it's typically the first that will stop venting, dropping Carbon Dioxide (CO₂), into the burners. This causes incomplete combustion which generates CO.

So what causes water heaters to improperly vent flue gases? Typically it's the pressure in the space where the appliance is located becoming more negative than the draft in the flue.

Instead of drawing gases out, the flue works backwards, pulling in outside air. This air can block the flue gas causing CO₂ to fill the burner area resulting in incomplete combustion.

WHY IT CAN BE WORSE IN WARM WEATHER

Most pressure imbalances in homes are caused by leaky ductwork and/or poorly balanced HVAC systems. In some cases building envelope issues can increase these imbalances.

When a forced air system switches from heating to cooling, the blower usually kicks up to a higher speed to move more Cubic Feet per Minute (CFM) of air through the ductwork and into the home.

When this happens any pressure imbalances will increase significantly, making the likelihood of poor venting greater than in winter.

This is just one of many reasons technicians should check for CO during service and maintenance visits. Other CO sources include improperly venting pool heaters, fireplaces, BBQ grills, stoves, generators, and so forth.

But you can't always be there to safeguard your customers' homes, **so the next best thing is a high-quality low-level CO monitor.**

A QUALITY LOW-LEVEL MONITOR

There are three important things to look for in a high-quality low-level CO monitor:

1. It should alert the occupants when there is a level high enough to affect their health – especially infants, children, and the elderly.
2. It uses a high-quality, reliable electrochemical sensor similar to what is used in professional CO/Combustion analyzers.
3. It's only sold by professionals who educate homeowners and know how to respond when the monitor signals dangerous CO levels.

A high-quality monitor should have different alert levels and sounds. The first alarm sounds typically at 15 PPM (Parts Per Million), and then a stronger alert at 35 PPM. The monitor should go into full alarm mode at 70 PPM with no delay.


Unfortunately, typical store-bought detectors have none of these features, and most are never tested at the factory. Because of UL Standards, these detectors do not go into full alarm unless levels exceed 70 PPM for up to 4 hours!

A healthy adult could easily not wake up after an hour or less at 70 PPM. A child or elderly person would succumb in even less time.

Everyone deserves to know the difference between store-bought **detectors** and professional grade **monitors**. It could save their lives!

For more than two decades NCI has been providing **National Safety Institute (NSI) Low-level Monitors**. Our second generation NSI 6000 meets all of the criteria outlined above.

The monitor also has Bluetooth features that allow data from the monitor to be stored in the cloud for easy access and analysis. Visit nationalsafetyinstruments.com to learn more.

The bottom line is CO never takes a day off. It can strike at any time. However, with the right training and tools, you can minimize the chances of your customer becoming its next victim. 

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OUTPERFORM!

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- **How To Solve the Top 10 Inverter Installation Issues** – Presented by Bryan Orr, Kalos Services and HVAC School
- **How to Properly Design with Today's Heat Pumps** – Presented by Adam Mufich, A-Team Heating & Air
- **The Air Upgrade Cure: A Simple Solution to HVAC Equipment Failures** – Presented by David Richardson, NCI VP of Training
- **PerformanceTown – Take Your Testing Accuracy to the Next Level** – Taught by the NCI Instructor Team.



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