

HIGH PERFORMANCE HVAC TODAY™

If You Don't Measure, You're Just Guessing!™

The Hurdles to Implementation: *All Technicians Are NOT Created Equal*

Nuances of
Field Airflow
Measurement

How to Be
Your Local CO
Evangelist

19 Leadership
Attributes (PART 2)



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**AHR
EXPO**

CHICAGO

JAN 22-24

NCI-Led Sessions:

Easily Quantify HVAC System Efficiency Loss Caused by Poor Installation

It's common knowledge that a poor installation will seriously deteriorate the performance of an HVAC system. The question is how much? This session will address a test method that quantifies the amount of efficiency loss. It will also pinpoint the system deficiencies so repairs can be made to restore performance.

Led by Ben Lipscomb, PE, and Rob "Doc" Falke, 11 AM - 12:30 PM, Room S102BC

Solve Hidden Maintenance Issues Using Testing and Balancing

Service managers, manufacturers and facility personnel claim up to 70% of the long-term service and maintenance issues can be identified and resolved through testing and balancing principles. Learn to discover these hidden defects in your systems by using straightforward field testing and diagnostics reviews in this session.

Led by Mel Johnson and Rob "Doc" Falke, 1 PM - 2:30 PM, Room S102A

From Estimate to Occupancy; Critical Documentation for Test and Balance Projects

Beyond balancing, fifty percent of the TAB professionals job is documentation. From company submittals and proposals to deficiency notices and close-out documentation. Learn best practices and professional requirements during every stage of documenting the TAB process.

Led by Scott Fielder, 3 PM - 4 PM, Room S102A

Why Residential Air Balance is Being Required By Code

Air balancing was once reserved only for commercial HVAC projects. However, many new building codes are requiring residential balancing. Investigate the benefits hoped for by this new movement and learn the reasons to specify and include balancing in your residential projects. Balancing verifies if the intent of system design has or hasn't been met.

Led by Rob "Doc" Falke, 1 PM - 2:30 PM. Room S102BC

Visit AHREXPO.com to Register

**HIGH PERFORMANCE
HVAC TODAY™**



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MANAGEMENT:

**Jumping Performance Hurdles:
All Technicians Are NOT Created Equal**

Contractor Michael Hartman shares how he overcame the challenges he faced training his service technicians in Performance-Based Contracting™.

**COMMERCIAL HVAC:
The Nuances
of Field Airflow
Measurement**

20

Ben Lipscomb explains the difficulties in measuring airflow rate through HVAC equipment in the field. He provides tips on how to make this easier for commercial HVAC service technicians.



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MANAGEMENT:

From Tradesman to Craftsman
Read how this 110+ year-old "tradesman-like" HVAC company transformed itself into a Performance-Based "Craftsman" Contracting firm.



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MANAGEMENT:

**My Journey to
Becoming a
Carbon Monoxide
Evangelist**

Becoming a CO evangelist can be a long and difficult road. It takes discipline and the will to measure every gas-fired appliance you come in contact with. Contractor Tom Johnson explains.

**LEADERSHIP:
19 Attributes of a
Great Leader**

Part Two. Last month, Author Mike Weil highlighted nine of the 19 attributes for great leadership. Here he provides the last 10 with a kick-off by Ronald Reagan.



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Monthly Download

This month's Tech Tip is on how to create your own **Template for Doing Rectangular Duct Traverses**. Traverses are the most accurate means for measuring airflow in a duct system, but they can be very time consuming to perform. The reason: you have to determine where to drill test ports on the duct.

This template can actually cut 75% of your time because it has the drill locations pre-determined.

To download, go to ncilink.com/md1217, or point your phone at the QR Code.

By registering for free on NCI's website, access this download and many more.



Online University

Featured this month is the **Business Management Basics Module** covering the **NCI Performance-Based Business Model**.

This course is designed to apply the same principles used in the field by service and installation technicians to the business itself. You will learn how to measure and use standards to set expectations within your company and guide your team successfully.

This course is an introduction to understanding how to use uniform standards to define performance expectations, create a business model that shows a supporting structure for a successful HVAC team, and how to use departmental measurements to create consistency in your company.

Learn more about this course in particular and the Online University in general by following this link: ncilink.com/ou1217



National Comfort Institute's Online University

The virtual Performance-Based training facility.

Advanced Technical Training

Are you working on becoming performance-based? These unique training classes are focused on technical side of performance-based contracting. Classes are available to all, NCI Members save money and earn NCI Bucks!

Business Management Training

These special courses are meant to strengthen your performance-based business culture and team. Intended for managers, owners & team leaders, you won't find brilliant ideas like these anywhere else. NCI Members save money and earn NCI Bucks!

Customer Service Training

Looking for top-notch CS training? These courses will enlighten and challenge your reps to new levels of achievement. Courses are available to all, NCI Members save money and earn NCI Bucks!

Basic Technical Training

These training courses are available 24 hours per day, 7 days per week, and cover topics ranging from HVAC electrical and hydronics to software skills. Some courses qualify for NATE CEUs. Classes are available to all, NCI Members save money and earn NCI Bucks!

WhyPBC.com

Have you been reading this magazine and hearing others talk about Performance-Based Contracting™? Did you know there is a website where you can go to learn more about what it is and how it can really differentiate your

company from competitors? Well, there is such a site. It can be found at ncilink.com/WhyPBC (Why Performance-Based Contracting).

NCI

Why Performance-Based Contracting™?

Happy Customers.

A Performance-Based contractor delivers comfort, safety and energy efficiency using proven, documented results. What does this mean? Simple: you, the Performance-Based contractor, rely on uniform, consistent and other measurements to diagnose system problems and identify solutions. Once the problem is resolved, the contractor repeats the measurements (objectively) to prove the system is working as promised.

If you're looking for more like this:

- Differentiate your company
- Increase customer loyalty and repeat
- Improve employee retention and morale
- Generate more referrals
- Increase customer satisfaction
- Make customers comfortable and happy

What's Performance-Based Contracting™? Here are just a few of the ways you need to achieve your objectives:

To find out more, download these articles for free:

- Why Performance-Based Contracting™
- Using Performance-Based Contracting™ to Increase Customer Loyalty
- Why "Value Performance Measurement" Matters
- Sell "Total Cost of Ownership" and More
- Following CO2 Hazards with Additional Equipment Safety Measures

NCI

This site defines what true Performance-Based contractors do, how this method of doing business benefits customers, and how it can bring more profits to your bottom line. Register and you can download free articles and other information to answer your questions about testing and measuring airflow the Performance-Based way.



BLOG POSTS



CARBON MONOXIDE: WHAT DO YOU KNOW ABOUT THE VALUE OF 'LIGHT-OFF' CO?

NCI's David Richardson discusses the importance of a measurement known as 'Light-Off' CO. In this blog post he takes a high-level look at how HVAC service technicians can make better diagnoses of gas-fired equipment operation using this measurement. This is a great blog post for the "techies" out there. Read it here: ncilink.com/LightOffCO.

SCIENCE FICTION OR NOT: NEW TECHNOLOGIES IN THE HVAC INDUSTRY

Somehow VP of Communications Mike Weil always manages to bring his favorite topic -- science fiction -- into a discussion. In this blog post, he turns his attention to 3D printing and virtual reality and how this tech is changing the very definition of the HVAC Industry. Where not so long ago, such tech was the stuff of comic books and space opera novels, today it is changing the way not only buildings are designed and built, but how it impacts mechanical equipment itself. Read it here: <http://ncilink.com/scifi>.



EXCITING NEW MEMBERSHIP OPTIONS

NCI Membership is the surest path to succeed at High Performance Contracting!

Membership has many benefits (check them out: ncilink.com/benefits), the biggest benefit: **Support**. Both our experienced staff and your fellow members are available to help you every step of the way. And now NCI offers three upgrade options to make sure you get the most out of your membership. All three upgrades include ALL basic membership benefits plus:

Learning Excellence Online

- Get extra NCI Bucks back every month
- Unlimited access to all of NCI's Online University, including webinars
- ComfortMaxx Pulse™ subscription

Learning Excellence Premium

- Get even more NCI Bucks back every month
- Unlimited access to all of NCI's Online University, including webinars
- ComfortMaxx Verify™ subscription

Learning Excellence Live

- Get even more NCI Bucks back every month
- Unlimited access to all of NCI's webinars
- ComfortMaxx Pulse™ subscription



Scan or click here for more information

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to discover how NCI Membership can help put your business on a fast track to success!



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Rick Vines
Owner - Vines Plumbing and Water Restoration



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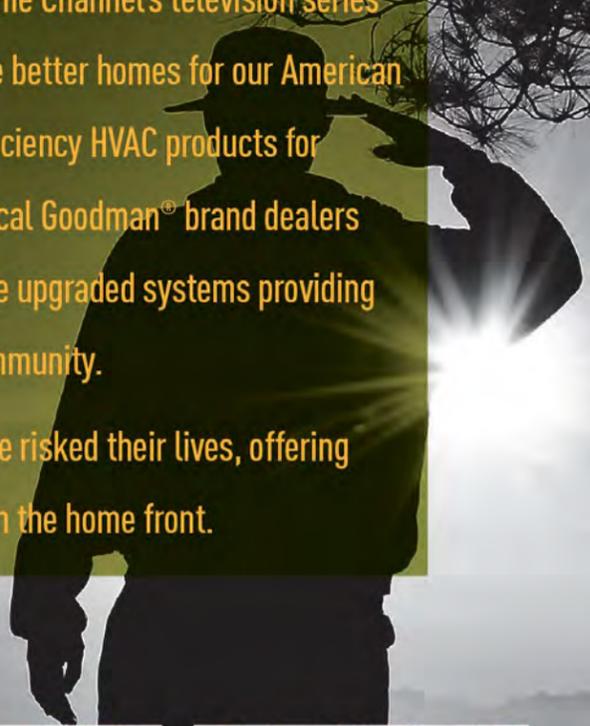
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Goodman is a proud sponsor of Lifetime Channel's television series **Military Makeover®** that helps create better homes for our American veterans. Goodman donates high-efficiency HVAC products for these veterans and their families. Local Goodman® brand dealers also donate their time to install these upgraded systems providing support to veterans in their local community.

This TV series salutes those that have risked their lives, offering hope and a helping hand right here on the home front.



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The Changing World of HVAC Contracting

Over the last 75 years the HVAC Industry has undergone a tremendous transformation. It wasn't so long ago that the industry focused primarily on residential and commercial new construction. It was male-dominated and operating at a time when the U.S. was undergoing crazy economic growth and violent change. Comfort became a sidebar to efficiency. Still, in the mid-1960s the phrase, "Total Comfort System" was coined, first by Westinghouse, then later by Lennox.

Ten to 15 years later the first oil crisis made energy efficiency the driving force behind HVAC engineering. That is when the newly created Department of Energy began making policies that still impact the HVAC industry today.

Then, during the 1980s, the construction boom crashed and the birth of the gigantic replacement market began. Computerization of business changed how small companies operated. The advent of direct digital controls shattered old preconceptions of how to manage energy use.

Change continued in the 1990s and 2000s with Internet and cloud-based technologies. Design/Build transformed how contractors delivered commercial and residential projects. We began to see more women joining the industry, as the shortage of skilled technicians in our workforce became painfully apparent.

In the tumult of all this, Performance-Based Contracting™ began to change the HVAC Industry by putting contractors on a path toward delivering measurable comfort to their customers.

That journey is being documented in **High Performance HVAC Today** magazine -- the voice of the Performance-based contracting industry. In this issue Michael Hartman of Thomas E. Clark tackles the need for technicians to understand total external static

pressure, pressure drops, and static budgets. In his article, *All Technicians Are NOT Created Equal* (page 14), he discusses hurdles contractors face as they address HVAC and air delivery systems in buildings.

Kevin Walsh, of Schaafsma Heating and Cooling, shares how his company *Made the Leap from being Tradesmen to becoming Craftsmen* in delivering true performance (page 17).

One key to delivering performance is measuring it. NCI's head of engineering, Ben Lipscomb, P.E. *Explains the Nuances of Field Airflow Measurement* in commercial HVAC systems (page 20). He discusses the potential difficulty in making those measurements in the field and shares several options technicians can use to make the job a bit easier.



Mike Weil is editor-in-chief and director of Communications and Publications at National Comfort Institute, Inc.

A FEW DECADES AGO COMFORT WAS JUST AN AFTER-THOUGHT. IT REMAINED SO UNTIL PERFORMANCE BECAME KEY TO DELIVERING WHAT CUSTOMERS PAID FOR

Finally, author Tom Johnson of TM Johnson Brothers says every technician who works on fuel-burning appliances should have extensive training in combustion and CO. His article, *My Journey to Becoming A Local Carbon Monoxide Evangelist* (page 22), addresses the vital importance of proper training and implementing what you learn into the daily operations and culture of your company. He provides real examples based on his personal experiences.

This industry will continue to evolve. Our plan is to help you keep up-to-date with those changes. In that light, we'd love to hear from you. Please be sure to visit our website at **HVACToday.com** and leave us comments to let us know what you think. Or just email me at MikeW@ncihvac.com.

Remember - change is transformational and it will never end. Be in the forefront and win. **NCI**

NCI and NBC to Present HVAC Performance Sessions at AHR Expo 2018

Next month Chicago will be the epicenter of the HVAC Industry's largest trade show event: The 2018 AHR Exposition. The event happens in the McCormick Place Convention Center, just outside The Windy City.

The educational segment of the exposition will be conducted by experts representing top industry organizations. Sessions will last from one to two hours, so you can learn something new in the classroom and still have plenty of time to spend visiting the exhibits.

This year, National Comfort Institute, Inc. (NCI), along with its National Balancing Council (NBC) subsidiary will be part of the exposition's educational program with four presentations that target the performance-based contracting segment of the HVAC industry.

MUST ATTEND CLASSES

The show, which takes place January 22-24, 2018, will feature the following classes from NCI/NBC:

- **Easily Quantify HVAC System Efficiency Loss Caused by Poor Installation** - Monday, January 22nd at 11 AM in Room S102BC. This session is being presented by NCI's Ben Lipscomb and Rob Falke. It addresses the issue of how a poor installation will seriously deteriorate the performance of an HVAC System. The question is how much?

The presenters will highlight a test

method that quantifies the amount of efficiency loss. It will also pinpoint the system deficiencies so repairs can be made to restore performance.

- **Solve Hidden Maintenance Issues Using Testing and Balancing** - Monday, January 22nd at 1:00 PM in Room S102A. NCI's Mel Johnson and Rob Falke say that service managers,

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manufacturers, and facility personnel claim up to 70% of the long-term service and maintenance issues can be identified and resolved through testing and balancing principles. Johnson and Falke will teach how to discover these hidden defects in your systems by using straightforward field testing and diagnostics. They will review each in this session.

- **From Estimate to Occupancy; Critical Documentation for Every Test and Balance Project** - Monday, January 22nd at 3:00 PM in Room S102A. NBC Director Scott Fielder takes a look at the key for success as a testing and air balancing (TAB) professional. Beyond balancing, 50% of the TAB professional's job is documen-

tation: from company submittals and proposals to deficiency notices and close-out documentation.

In this session you will learn best practices and professional requirements during every stage of documenting the TAB process.

- **Why Residential Air Balance is being Required by Code** - Tuesday, January 23rd at 1:00 PM in Room S102BC. NCI President Rob Falke will discuss how air balancing was once reserved only for commercial HVAC projects. Today, however, many new building codes require residential balancing. Learn about the benefits hoped for by this new movement and why you should specify and include balancing in your residential projects.

These sessions are free and no preregistration is required.

To learn more about the 2018 AHR Exposition, visit their website at <https://ahrexpo.com/>.

VISIT THE NCI AND NBC BOOTH

In addition to participating in the AHR Exposition educational program, NCI and NBC are exhibiting during regular trade show hours.

Be sure to stop by and speak with representatives about the advantages of performance-based contracting and how it can benefit your business. Visit them in booth 7478 during show hours, which you can find posted on the AHR-Expo website: <https://ahrexpo.com>.

LIGHTWEIGHT, BUT RUGGED FLOW HOOD

The Testo 420 flow hood comes with a soft case and has built-in Bluetooth for integration with a mobile app. Equipped with a large, easy-to-read backlit display that is removeable to make it easy to see readings. It handles operating temperatures between 23 and 140F, comes with



2 GB internal memory, runs on standard AA batteries, and carries a 2-year warranty. For more information or to order, go to ncilink.com/1217Testo420 or call 1-800-633-7058.

AIR METER/DRAFT GAUGE

Get reliable results with no calibration using the Dwyer 460 air meter/draft gauge. It provides reliable, accurate results without the need for tedious calibration. Rugged plastic for rough daily use. Dual velocity ranges read 260-1200 and 1000-4000 fpm; pressure ranges from .005-.09 and .05-1.0 inches w.c. It is indispensable for mea-



suring draft in appliance flues. Follow National Comfort Institute's (NCI) protocol and accurately measure and diagnose flue problems with this handy tool. Use on standard, mid, and high-efficiency furnaces, boilers and water heaters. For more information, or to order, go to ncilink.com/1217Dwyer460 or call 1-800-633-7058.

SEND PRESS RELEASES: If you are a vendor or manufacturer serving the HVAC Industry and have a product geared to Performance-Based Contracting™ firms, send press releases and digital images to pressrelease@hvactoday.com.

Upcoming NCI Training & Event Schedule

Commercial Air Balancing Certification Program

Dec. 12-14, 2017: Chicago, IL
Jan. 23-25, 2018: Houston, TX

Combustion Performance & Carbon Monoxide Safety Certification Program

Dec. 5-7, 2017: Kansas City, KS
Dec. 12-14, 2017: Mobile, AL
Dec. 19-21, 2017: South Plainfield, NJ
Jan. 9-11, 2018: Charlotte, NC
Jan. 9-11, 2018: Cleveland, OH
Jan. 16-18, 2018: Atlanta, GA

Commercial System Performance Certification Program

Dec. 5-6, 2017: Los Alamitos, CA*
Dec. 12-13, 2017: Tulare, CA*
Dec. 19-20, 2017: Columbus, OH

Duct System Optimization Certification Program

Dec. 5-6, 2017: Tulare, CA*
Jan. 30 - Feb. 1, 2018: Lansing, MI

Duct System Optimization & Air Balancing Certification Program

Jan. 16-18, 2018: San Antonio, TX

Optimize Economizer Performance with Certification

Dec. 7, 2017: Los Alamitos, CA
Dec. 14, 2017: Tulare, CA

National Balancing Council Commercial Balancing with Certification

Dec. 4-8, 2017: Cleveland, OH

Residential HVAC System Performance & Air Balancing Certification Program

Dec. 12-14, 2017: Baltimore, MD
Jan. 9-11, 2018: Phoenix, AZ
Jan. 23-25, 2018: Jacksonville, FL
Jan. 30 - Feb. 1, 2018: Nashville, TN

*Subsidized NCI training offered by Southern California Edison.

TO YOUR Success[®]

–It's All in the Name

Picture this: the year is 2000 and during a young industry trade show once known as HVAC Comfortech (in Atlanta, GA), a new exhibitor makes its first foray into the world of mechanical systems contracting. The company had two very unique attributes: its name and the fact that they were passing out little bags of cookies to any attendee who happened by.

The company was *To Your Success* – a service organization with the unique mission of helping business owners retain and amaze their customers. Company owner and founder Jim Childers says that “*To Your Success* is more than the name of a company. It is our commitment to business owners.”

And their little booth on the show floor of HVAC Comfortech 2000 led them to becoming one of the largest providers of customer retention services in the HVAC industry.



To Your Success made its debut in the HVAC Industry in 2000 when HVAC Comfortech set up shop in Atlanta.

But wait – let’s take a step back. Where did this outfit come from? Geographically, Childers and his wife started the business in 1998 in Atlanta. How that came about was interesting – because the Childers were never in the HVAC business – they were in the recreational vehicle (RV) industry. Jim and his brother owned a successful Atlanta-area RV dealership.

Jim Childers, a 66-year-old entrepreneur who spent 20 years in the family-owned RV dealership, says that in those days, one of the vehicle manufacturers had a sophisticated way of measuring customer satisfaction. Childers’ dealership usually ranked very high – between a 93 and 94% CSI (customer satisfaction index). Good stuff, right?

“But a fellow dealer in a neighboring state was getting closer to 100%,” Childers says, “so I asked him how he was doing that. He told me he took an extra step by sending cookies to customers to thank them for their patronage. I was encouraged me to try it, which I did and sure enough it worked.”

“What I learned from this was that the unexpected nature of a thank-you gift to show appreciation made a tremendous impact on our customers’ satisfaction and loyalty. It actually did increase our CSI rating.”

So that was the basis for starting *To Your Success*.

Childers explains the RV Dealership had ceased to be the challenge it once was and he felt he had a calling to do something else. He wanted to apply the



Pictured left to right: Zach, Olive, and Jim Childers

retention lessons he learned in the dealership to something new.

IN THE BEGINNING

To Your Success opened for business on April 1, 1998. Initially most of their customers were RV dealers. “But I had a very good friend who was a territory manager for [Mingledorff’s](#) – an HVAC Carrier distributor here in Georgia who suggested I really check out the heating and air conditioning industry,” Childers says. “He encouraged us to exhibit at the HVAC Comfortech show in 2000 to test the waters.”

The results were incredible. Childers says they got a tremendous response – around 75 HVAC companies signed up with *To Your Success* at that first show.

He adds, “We realized HVAC contractors had the desire to follow up with customers, but no one had the time or the expertise to do it. We were in the right place at the right time. That’s what caused us to focus on the HVAC Industry. From Comfortech we spread out to other

HVAC organizations and trade shows and really began to grow from there.”

LESSONS LEARNED

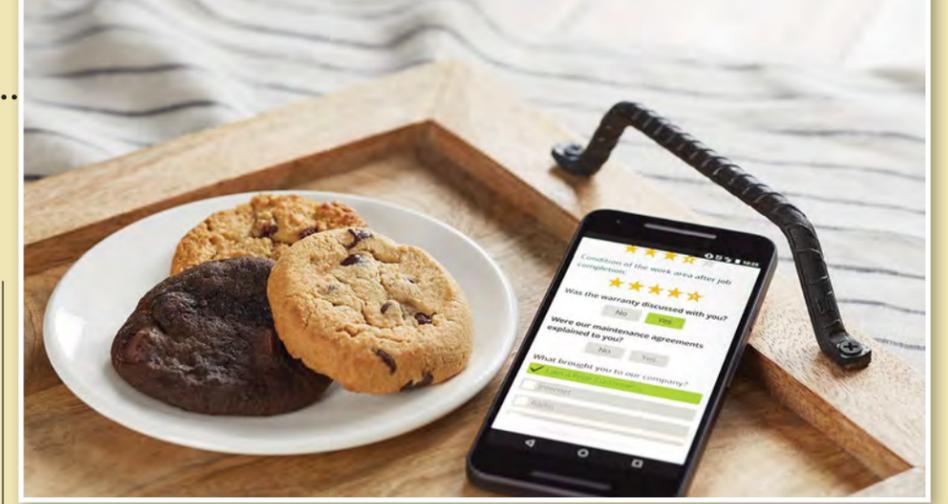
It is generally accepted across the HVAC industry that it is seven times more expensive to acquire a new customer than to retain an existing one. Jim Childers says the thing that helped his business more than anything else was learning from their customers over the years.

“We have had the opportunity to really cater to their needs,” he says. “Our desire is to help others be more successful in their business. I really didn’t want to be a bakery. I wanted to be a company that makes a difference in how other small businesses succeed. They needed help. I wanted to provide that.”

“We help business owners provide more than great service - everyone expects that. We help them develop a long-term relationship with their customers based upon their overall customer experience. Showing appreciation and listening through focused surveys shows consumers they are valued as individuals, not just transactions. In the home service industry there are many people with great technical skills but who often struggle with the “personal relationship” side of the business. The old adage, “People don’t care how much you know until they know how much you care,” is most effectively demonstrated when a company culture is designed to provide both aspects. This is what we do best.”

FAMILY BUSINESS

Jim Childers has been married for 45 years and has four children. Most of his family is involved in the business in some fashion. His son Zach has been involved with the company from day one. Zach Childers was 15 years old when *To*



Delicious cookies delight customers. Their feedback is manageable on mobile devices.

Your Success became real and he worked with both of his parents out of the family home.

“My job was to get everything for our customers set up. This meant creating greeting cards, configuring surveys, doing our marketing, printing business cards and brochures. Our entire platform was really homegrown right from the beginning.”

So how does a 15-year-old do all this. Zach Childers says he always seemed to have a knack for things related to technology, computers, and graphic design. In fact, he says that he ran his own design business while he was a high school student. Afterwards, he attended Thomas Edison State University where he studied business management and worked remotely on *To Your Success*.

He says, “I loved the business from its start and decided I wanted to make it the focus of my working life. It’s been a passion since the beginning. Being able to work with my parents and being part of a family business has been exciting.”

“How many high school and college kids can say their parents let them be an integral part of a startup business? My dad trusted me to do what needed to be done. From the beginning we just worked great together. His leadership just drew me into it and I am so thankful for that. I have really loved every step of it. It’s a crazy thing to really look forward to Mondays and not wanting to wait to get into

the office. It’s been that way for 20 years.”

Today Zach Childers runs the daily operations of the company and handles what he calls, “the technology side of things.”

FROM COOKIES TO BEYOND

To Your Success today employs over 20 people, including seasonal and part time employees. According to Zach, on any given week there are 10 to 12 people in the office. That includes in-laws Caleb Baitz and Derek LoVerde, his sister Rebekah Baitz, brother John Childers, and his mother, Olive Childers are also active.

So, the question begging to be asked: who bakes the cookies? Jim Childers says that everyone has at one point or another over the years. But today they have a group of bakers who handle that for them.

The cookies were always the first step in the *To Your Success* approach to customer retention. In effect, cookies are a small gift to thank customers for their business. Sending them out was a service that made it easy for contractors to follow up with customers.

Says Zach, “Our job is to make the follow-up process effortless for contractors. It makes that thank-you feel more personal and relational. But *To Your Success* does more than that. We offer contractors a comprehensive customer follow-up strategy that combines those cookies with a business intelligence plat-

form to help them strengthen their customer relationships and reduce churn.”

According to the *To Your Success* website, their retention strategy has four key points:

- **Delight customers** – [gifting services](#) that include freshly-made cookies, candies, nuts, coffee and cocoa, and other gifts
- **Listen to their feedback** – surveys done online and through email that can include embedded video messages (called [eTouch](#)), mobile optimization, responsive design, real-time customer feedback, daily reports, analytics, and more
- **Understand their experience** using [analytics and insight](#). This is the business intelligence component of *To Your Success*' service offering
- **Showcase positive reviews** using *To Your Success* ['RaveMaker'](#) automated reputation management tool that integrates easily with social media and optimizes positive reviews for search engines.

“You can't improve something that you aren't mastering, Zach Childers says. “It's like the [ComfortMaxx](#) approach. With that



Zach Childers

tool and with training, contractors know where to measure the different metrics related to HVAC system performance.

“That's what we are trying to provide with our system. Instead of pressures and temperatures, we measure actual feedback from customers, so a contractor owner or manager can get a real-time alert through email when someone is not happy. They can then pick up the phone and immediately call. They have all the information they need at their fingertips to reach out to the customer and make it better.”

TO YOUR Success[®]

Customer Delight. Business Insight.[®]

Jim Childers concurs. “Our system is designed to help all contractors of all sizes. It doesn't put the burden on them. Some contractors are trying to get their superstar technician to talk good reviews out of a customer. We are trying to improve the contractors' business and encourage their employees to do well.”

THE NCI BAKE-OFF

Though Childers first contact with the HVAC Industry was at that early Comfortech event, he and his team didn't encounter National Comfort Institute, Inc. (NCI) until much later. According to Jim Childers, as they began reaching out to other groups and organizations in the HVAC Industry, they began partnering with several of them, including one known as International Service Leadership (ISL).



Jim Childers

This group was formerly called Contractors Success Group. *To Your Success* became an ISL vendor partner until 2008 when NCI purchased ISL. According to Childers, his company then became a vendor partner with NCI.

Zach Childers says that as a policy, *To Your Success* always seeks partner groups that attract forward-thinking contractors. They found that in ISL, and he says they were really impressed by the membership of NCI.

“It was a natural fit for us,” Jim Childers adds. “NCI members are seeking to better their performance in multiple ways. And that is exactly the type of folks who work well with us. What we do works

for companies that want to treat people right, to grow their business. NCI members want to do an excellent job technically. Most of them have a better grasp on technical performance than they do on experiential performance with the consumer. It is a natural fit for us. That is our wheel house.”

Zach Childers adds “the recipe for success between our company and NCI is obvious. This is a great partnership for both of us.”

NEVER FORGET

HVAC contractors should remember that keeping customers is easier and less expensive than getting new ones. For those who need help improving customer retention, companies like *To Your Success* are just what the doctor ordered.

“Never forget who writes your check,” says Jim Childers. “No matter what industry you work in you can't become complacent or cynical. You must appreciate the people around you. Without the customer nothing happens.

“We try to treat our customers as royalty. That is our job. If we can't do it, then who can? The average HVAC contractor already has a very hard job. They are great at putting technicians into the field, into people's homes, and getting great results. Our job is to help them do that better.”

Zach Childers agrees and adds that “Customers are the most valuable assets of any company. No one will ever regret investing in their customers. So, delighting the customer and setting yourself apart from the competition will always pay off in the long run. It isn't something that should be taken for granted.”

To Your Success : the name certainly says it all. Congratulations to this month's Vendor Spotlight.

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By Michael Hartman

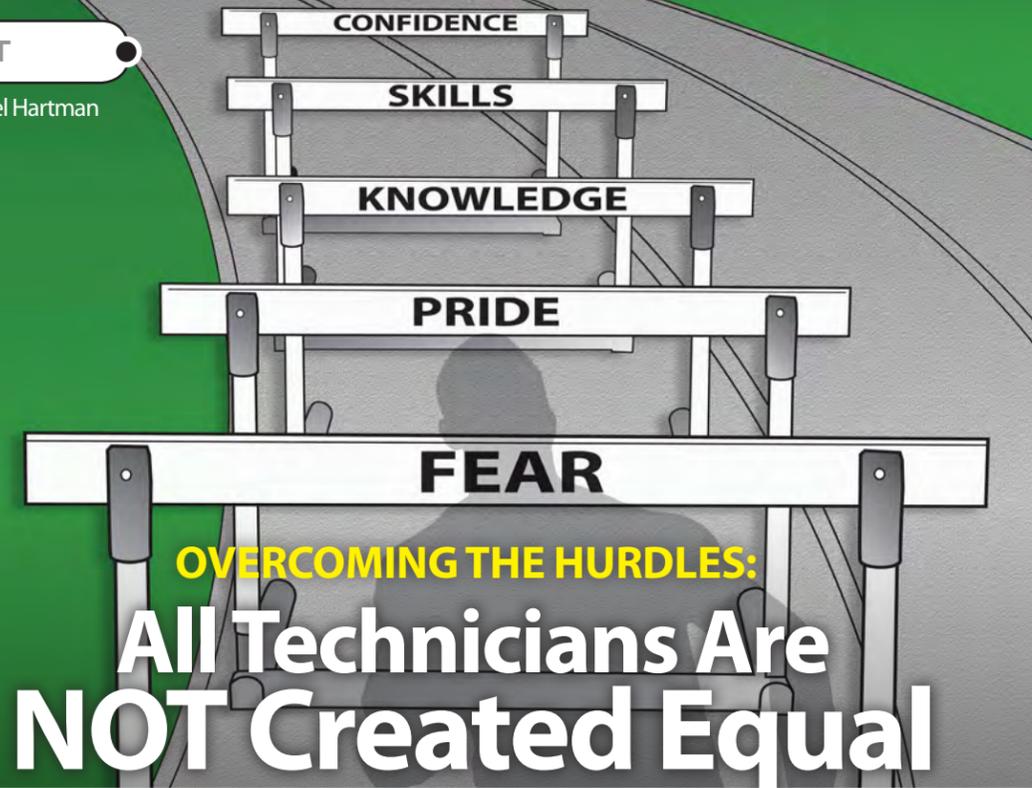


ILLUSTRATION BY GEORGE MIKLOS

OVERCOMING THE HURDLES:
All Technicians Are NOT Created Equal

Every Independence Day we celebrate our glorious founding and the Declaration of Independence that proclaims, “*all men are created equal with certain unalienable Rights.*” While that is certainly accurate in life, it is most certainly inaccurate in the HVAC trades.

Remember going through trade school? Think about how there was the guy who could conceptualize theories or procedures with a simple explanation. And the other guy who needed to actually put his hands on things and do it himself in order to learn it, whatever it was.

It seems that there are those who “see” things more clearly than others. They have more mechanical minds. They’re wired differently. Of course, there are also those who take a little longer to grasp certain concepts, but are just as smart. It is our job as managers and owners to figure out who’s who in our organization.

Despite what the Declaration of Independence says, all HVAC technicians are NOT created equal.

GET STARTED

In 2016, I was invited by David Richardson, of [National Comfort Institute, Inc. \(NCI\)](#) to present at the annual NCI Summit in Savannah, GA. Our topic – “just get started.” This was perfect for me on several levels.

First, joining forces with Dave was perfect. He knew of our Performance-Based Contracting™ implementation challenges and helped us get back on track.

[Our company](#) was like so many of the companies that attended our NCI Summit sessions. We took a long time to finally start and get everyone on board. Our team had the training and support, but lacked the commitment. So we struggled with implementation and consistency.

TECHNICIANS SHOULD UNDERSTAND TESP, PRESSURE DROPS, AND STATIC BUDGETS

I took my first Air Balancing class in Rockville, Maryland in 2005. To demonstrate just how long ago that was, NCI President Rob Falke was the instructor. I was fortunate enough to take his class, but even more fortunate to hear his words: “*I don’t care what the efficiency rating is on that box (the outdoor unit), if your delivery system isn’t right, you’re not getting it!*” Talk about feeling foolish!!! The concept was so obvious.

How could I have not come to that conclusion on my own? Rob’s words were so poignant that they still live in the front of my brain a dozen years later. Once I figured out the solution to complete implementation of ANY system, the simplicity of it had me wondering again what

took so long to figure it out.

What I am talking about is [Total External Static Pressure \(TESP\)](#). Once armed with the knowledge of TESP, pressure drops, and static budgets, I was raring to go. I tested my system, the neighbors’, and my relatives’ systems. I bought a flow hood, [Magnehelic gauges](#), and [thermo-hygrometers](#) for my technicians so they could test every system they came across. Then I told them to test their own, their friends’, and their family’s systems.

TEAM BUY-IN ... NOT SO MUCH

Change is hard. Technicians don’t buy in to Performance-Based Contracting all at once.

What I didn’t know was that I was like [Will Ferrell](#) in the movie *Old School*: leading college students to go streaking in the Quad, only to find that he was streaking by himself.

I did have one guy who completely embraced the training and tested every system he saw. He became so good that it intimidated the rest of the crew so they would never test or ask questions about testing. The tools I bought them just bounced around their truck, never used.

I spent years trying to get everyone excited about [Air Diagnostics and testing](#). I had everyone certified and re-certified. Sometimes I would get angry and very vocal. I felt I had done everything necessary to help my guys succeed.

That rationalization about “*you can lead a horse to water, but you can’t make him drink,*” became real to me. I blamed them but the blame was squarely on me. I had failed to realize my organization’s strengths and weaknesses – a mortal sin in any position of leadership.

ONE-ON-ONE APPROACH WITH TECHNICIANS

Finally, I tried a new approach. I told one of my techs who was very nervous about [Air Diagnostics and Combustion Analysis](#), to take static pressure readings and bring them back to the office to discuss with me. I told him to say nothing to the customer about his readings or that he even took readings. He took the readings, brought them to me, and we went over them on the white board. We drew the layout of the system and plotted his readings accordingly.

We did this over and over and over again. He eventually got comfortable enough to educate our customers about

bustion analysis. He admitted he was afraid the customer would ask him a question he couldn’t answer. It is human nature to avoid the things with which we are uncomfortable.

Again, I took a one-on-one approach: I had him take his readings, write them down, and then I went over them with him at the office. For him, the key was not having to discuss the readings with the customer until he was comfortable. Removing the pressure of a potentially uncomfortable situation made all the difference. Shortly thereafter, he was one of our better combustion analysts.

That same tech was struggling with Air Diagnostics as well. I used the

THAT RATIONALIZATION ABOUT “YOU CAN LEAD A HORSE TO WATER, BUT YOU CAN’T MAKE HIM DRINK,” BECAME REAL. I BLAMED THE TECHS, BUT THE BLAME WAS SQUARELY ON ME.

static pressure and what it means to air flow and efficiency. Again, I felt very foolish for missing the glaring simplicity of this strategy for so long.

I had another technician who was deathly afraid of performing a com-

same strategy as before – test, say nothing, discuss with me in the office. Suddenly, he had customers helping him test their systems while educating them in the process.

TECHNICIANS SHOULD ENABLE CUSTOMER PARTICIPATION

One great story I like to share involves this same technician. He found a system with a large pressure drop across the evaporator coil.

The tech had the customer testing with him while telling her what pressure drop he was looking for. Then he said he’d clean it in place and quote a price to do so. However, the technician warned that if it didn’t work he would have to pull the coil out and clean it more thoroughly. Finally, he quoted



Change is hard. Technicians don’t buy into Performance-Based Contracting all at once.

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an additional price for that.

She agreed to take a chance and have him clean it in place. He did but the pressure drop was still too high. She had him pull the coil and clean it. He tested it again and got the pressure drop down to where it needed to be. She was thrilled and happy to pay the extra money for pulling and cleaning the coil.

Testing with the customer -- step-by-step -- got her invested in the project. He said it became a mission for her to get the right pressure drop. She was saying things like “*what do we do next?*” It would be great if every customer was so involved and excited about testing. Unfortunately, she was the exception, not the rule.

GETTING TRACTION

Since changing our implementation strategy, all our technicians are now testing every system they work on. They all have success stories of varying degrees. They also have had extreme challenges with customers who were very suspicious of their findings. Those of us who are testing have all heard people say, “*I’ve lived here for 15 years and have never had a problem*” or “*nobody has ever told me this before, why is it a problem all of a sudden?*”

We find it best to not argue with them. We share our findings, document our recommendations, and move on. The more you try to convince them, the more suspicious they become. Today, when we find a system with a high TESP we simply ask the customer which rooms are warm in the summer and cold in the winter. Most of the time, they look at us like we have a crystal ball. They wonder how we knew they had those issues, which gives us instant credibility. If they say they

ILLUSTRATION COURTESY OF ISTOCKPHOTO



Today the technicians at Thomas E. Clark are testing every system they encounter. The company is finally seeing some traction when it comes to making Performance-Based Contracting work.

don’t have any comfort issues, we explain our findings and their options. Now the ball is in their court.

TECHNICIANS NOT CREATED EQUAL

Our technicians are now very comfortable having these discussions with customers. They not only have the knowledge, but the confidence to educate our customers. Once I stopped trying to fit a square peg in a round hole, everything fell into place.

Understand not all technicians are equal and that’s OK. They learn at their own pace and comfort level. Find out what that is and adjust their progression accordingly. Be patient and the results happen quicker than you expect. 



Michael S. Hartman is the owner of Thomas E. Clark HVAC, Inc., a family-owned and operated plumbing, heating, and air conditioning firm located in Silver Spring, MD. Since joining the business in 2002 he has been working steadily on bringing the business into the 21st century by re-targeting their focus on Performance-Based Contracting™ as prescribed by National Comfort Institute, Inc. He can be reached at Mike@ThomasEClark.com.

From Tradesman to Craftsman: How Our Company Made the Leap

After more than 110 years in business, our management team made the decision to evolve into a performance-based service company. Very early in that process we began to understand we needed a new level of leadership for us to succeed.

As leaders of our business, we had to get out front and lead, before we could expect the rest to follow. We regularly compared this process to *pulling ropes versus pushing them*. In life, a real leader must be out front pulling, not pushing from behind.

Our management learned this the hard way. We erroneously thought we could stand behind our troops and bark orders to measure and test and diagnose and fix! Obviously, the results of doing that were less than stellar. Once we figured out we needed to be out front leading by example, we began to succeed.

The more we focused on how to better lead towards performance-based disciplines, the more our teams responded, and they began evolving from tradesmen to craftsmen.

OBSTACLES WE FACE

Notice I used the word *face*, as opposed to *faced*. This is because we’re still facing obstacles. As we continue advancing our abilities to test, diagnose, and sell renovation jobs, we keep encountering new obstacles to overcome. New problems are the cost of progress. Before long, we were overcoming new difficulties as a regular course of business. Each time we eliminate new obstacles, we move forward.

GET LEADERSHIP TRAINING ...

The first step we took after deciding to fully embrace the performance-based philosophy, was to get our company leadership trained by [National Comfort Institute, Inc.](http://NationalComfortInstitute.com) (NCI). During training, we “saw the light” and clearly understood what we wanted to happen. We imagined that if we sent our salespeople, installers, and service techs to this training, they would also see the light and the transition to performance-based would be simple and automatic.

... THEN TRAIN THE GUYS

We learned from our initial experience that when just the Schaafsma leadership preached performance, the guys didn’t believe the sermon. What we needed was an outside expert confirming and teaching the same principles. After the guys heard and understood it from someone else, our job was to simply reinforce it.

Our excitement skyrocketed as guys returned from training and the renovation jobs started rolling in. As we installed the new type of work, we realized our lack of process systems made things not work smoothly. Without such processes to guide sales, scope of work, communications, and pulling materials for this new style of work,

The light bulb really went off for us when we began to understand it’s too hard to get 30 people rowing in the same direction when they all don’t want to go to the same place.

They didn’t want to go to the same place, because they couldn’t see the benefits we would receive once we arrived.

PHOTO COURTESY OF ISTOCKPHOTO



Duct renovations are an important part of the Schaafsma Performance-Based Contracting™ approach to HVAC service. [For more on this company, click here](#)

we began to slip back into old beliefs and habits. Old was easy, new was not comfortable, and we drifted off our target.

Lesson learned: performance-based contracting requires more work than just getting trained. So, we took a deep breath and began to figure out the next step toward success.

BUILD A PERFORMANCE-BASED CULTURE

It became clear our expectations were still too high. We expected everyone to automatically jump on board and figure it out. To be successful, we need a long-term plan to nurture and build the Performance-Based Contracting™ culture throughout our company.

The light bulb really went off for us when we began to understand it's too hard to get 30 people rowing in the same direction when they all don't want to go to the same place. They didn't want to go to the same place because they couldn't see the benefits we would receive once we arrived.

So we still needed buy-in from everyone. To accomplish this, we needed to share the vision with front-line evangelists throughout the company. We identified those managers and key

people already committed to quality and integrity, already open to improving even more.

These were the team members who would willingly participate in daily interaction with the rest of our

co-workers. It made sense that they share their knowledge and example on the front line.

SUPPORT YOUR MANAGERS

Through this approach, we believed everyone would not only be on the same boat, but would be rowing in the same direction. As more joined in, the momentum began to increase and took on a life of its own. The leadership team realized by supporting the managers and key people to build our performance-based culture slowly into the company, the change would stick.

The new culture began to stick even more as we addressed and overcame other obstacles that continued to appear. Team members saw us consis-

Meet Kevin Walsh at NCI Summit 2018

High Performance HVAC Summit 2018 is happening March 4-6 in Austin, TX. Kevin Walsh is one of six Performance-Based Contractors™ presenting how they Blaze A Trail to High Performance. Walsh, who is president of Schaafsma Heating and Cooling Company, Grand Rapids, MI, will discuss the many challenges he and his team faced when implementing Performance-Based Contracting™ into their 110+-year-old business.

Using principles outlined in Jim Collins' book, "Good to Great," Kevin will discuss how he and his key leaders successfully rolled out this new business approach and overcame challenges at all levels of the company – including the very top.

Come meet Kevin and network with your peers in Austin. Learn more about the Summit 2018 program at GoToSummit.com

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Summit 2018 offers you and your team a tremendous opportunity to not only hear from some of the Performance-Based HVAC Industry's finest as they share their wins and challenges, but also a chance to network with like-minded contractors from across the nation.

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After Summit ends, stick around for our Postshow Training classes and then head into downtown Austin for one of the world's best music festivals, South by Southwest. [Click here for details.](#)



tently overcome each obstacle and began to realize how committed we are to building and maintaining the performance-based culture. This constant action proved to everyone that this new way of doing business was here to stay.

SUSTAINING THE CULTURE

Culture is the hardest thing to change in a company, especially a 110-year-old company like Schaafsma. Now, we are far enough down the road to know we must maintain this culture, or we'll slip back into the old, bad habits.

Our work is never done, because we

Besides being Performance-Based in their work, Schaafsma also is community focused as evidenced in their support of our nation's veterans.

intend to move forward in our mission. Sustaining this culture requires accomplishing the tasks needed to keep the performance-based fires burning in our business.

This means continuous training. It means measuring and reinforcing success daily. We motivate team members with positive feedback and sharing success stories. This assures everyone in the company sells themselves on the benefits of performance-based craftsmanship. The information we share also confirms to everyone how well this new culture is working and paying off for all of us.

IT'S A CONTINUOUS PROCESS

We measure daily and monitor daily. This is especially important in the

beginning, at a time when it's too easy to fall back into old habits. Measuring and monitoring creates a new reality as co-workers can see both the good and bad. The good pulls us forward and the bad helps us see what we need to improve.

We have witnessed how becoming and remaining a performance-based business has pumped new life into an old company. How else do old companies continue to thrive? NCI



Kevin Walsh is the President of Schaafsma Heating and Cooling Company, located in Grand Rapids, Michigan. Kevin is featured as a speaker for NCI's Summit 2018 in Austin, Texas. His presentation will expand on the topic of this article.

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Explaining the Nuances of Field Airflow Measurement

Airflow rate through HVAC equipment can be one of the most difficult measurements to make in the field. This is mostly due to common equipment and system configurations that do not provide acceptable measurement sites. Ideally, we'd measure average air velocity through a straight section of duct near the equipment. We'd measure using a manometer and pitot tube, or a thermal anemometer. Then we'd multiply average velocity by duct cross-sectional area to find volumetric flow rate. This method can achieve accuracy on the order of ± 4 or 5% under ideal conditions. However, it's rare to have the luxury of performing a textbook traverse in the field.

DIRECT MEASUREMENT

Directly measuring air velocity through the equipment requires a length of straight duct before and after the measurement plane for best accuracy. Once you've selected the measurement plane, perform a traverse, making multiple measurements at various points within that plane. The number and location of points necessary for an accurate average velocity depends on the shape and size of the duct.

ASHRAE 111 provides guidance on selection of an acceptable measurement plane, as well as selection of traverse points using either

the Log-Tchebycheff or Equal Area methodology. Of these two methodologies, multiple studies suggest that Log-Tchebycheff is more accurate. However, it's easier to calculate the traverse point locations using the equal area method, and the accuracy is acceptable for most HVAC applications.

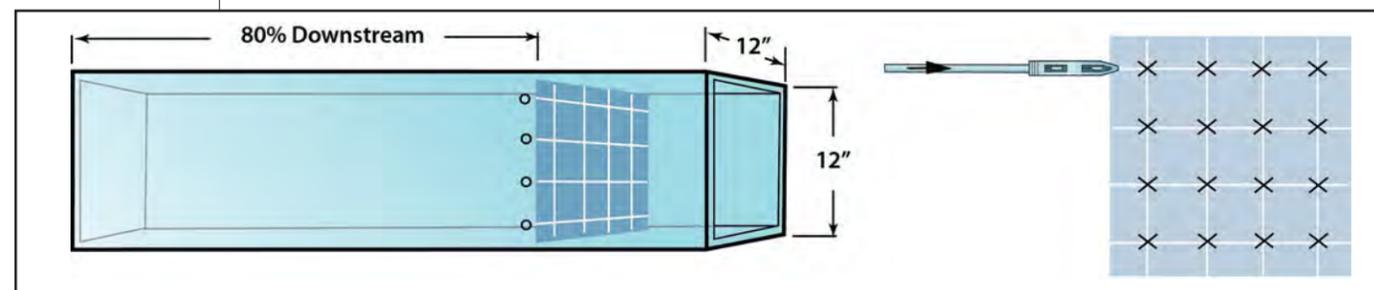
NON-IDEAL MEASUREMENT LOCATIONS

When an ideal traverse plane isn't available, ASHRAE 111 also provides guidance for determining whether a traverse produces an accurate result based on measurement values. The guidance basically states that 75% of the velocity measurements in the traverse need to be greater than 10% of the maximum velocity measured, and none of the measurements can be negative. If we must take a measurement in a questionable place in the duct system, this guidance can be a valuable tool to boost confidence in our result.

PLOTTING CFM USING STATIC PRESSURE AND RPM

When you can't achieve direct air velocity measurements because of the system configuration, we recommend estimating airflow using a manufacturer-supplied fan curve or fan performance table. In this approach, measure the fan speed in rotations per minute (RPM) and fan static pressure

Downstream traverse locations.



rise. Larger fans typically come with built-up air handlers. A full fan curve is usually available for the fan itself.

With packaged equipment, fan data is most often provided in the form of a table. Packaged equipment usually provides the data in relation to Total External Static Pressure (TESP) instead of fan static pressure rise. The TESP is the pressure rise from the return air inlet to the supply air outlet of the equipment. Fan static pressure rise is from the inlet to the outlet of the fan alone.

For direct-drive motors common on residential equipment, the manufacturer usually provides airflow data in relation to static pressure and the motor speed setting (i.e. "speed tap" or "dip switch setting"). In these cases, the RPM measurement is not necessary.

MANUFACTURER-SPECIFIC NUANCES

Manufacturers have various approaches for developing performance tables. When applying the data to field measurement, pay special attention to the conditions used to develop the table. For example, one manufacturer could develop their table for a "dry" coil with no filter. Meanwhile, another manufacturer develops one for a "wet" coil with a "clean" filter. Accessories or optional equipment -- like gas heat exchangers, electric heat strips, and economizers -- also typically requires special consideration.

One way to deal with these nuances is to determine differences between the internal pressure drops of installed equipment and the equipment configuration used to develop fan performance data. Add or subtract internal pressure differences from measured TESP. Then

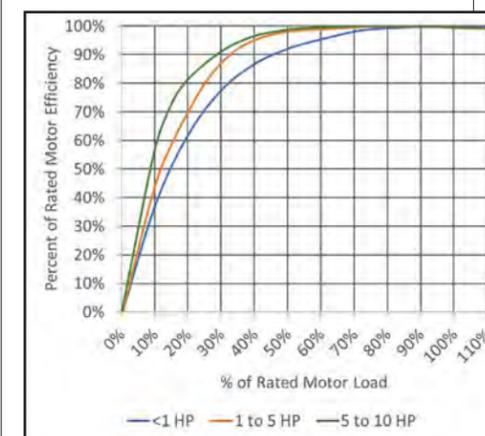
MODEL	SPEED TAP	.10"	.20"	.30"	.40"	.50"	.60"	.70"	.80"	.90"
3 TON	HIGH	1394	1359	1314	1260	1202	1122	1038	945	813
	MED-HIGH	1266	1229	1182	1132	1086	1018	932	838	711
	MEDIUM	1102	1092	1069	1034	986	925	852	766	668
	LOW	957	944	922	891	853	806	750	686	614

Typical manufacturer-provided performance table.

use the resulting adjusted TESP and measured RPM to determine airflow.

BRAKE HORSEPOWER PLOTTING

Some manufacturers provide airflow data in relation to static pressure and brake horsepower (BHP) instead



of, or in addition to, RPM. In these cases, use a power meter to measure input power to the motor. Next, estimate motor and drive (e.g. v-belt drive) efficiency to determine BHP. It is important to remember that motor efficiency is not static, but varies with motor loading. Depending on their size, motors usually achieve near-rated efficiency between 70% and 100% of their rated load. Below 70% loading, efficiency begins to drop off.

When both RPM and BHP data is provided, you can use both, plus the static pressure rise, to verify your measurement. They will also establish a range if the two methods produce different results.

FAN CONDITION

Equipment manufacturer data is developed with clean fans that are in

good condition. Bent, broken, or dirty fan blades and housings impact fan performance and are not accounted for in manufacturer data. There's no consistent way to determine the impact of fan condition. However, it's important to remember that a dirty or damaged fan could produce airflow 10% to 20% lower than indicated by manufacturer data for a given pressure and RPM.

Assessing airflow through HVAC equipment in the field can be difficult. But it is critical for achieving capacity and efficiency at or near manufacturer ratings. It is also a pre-requisite for properly charging refrigerant circuits and performing other refrigerant temperature and pressure-based diagnostics.

Poor airflow through equipment can indicate issues like dirty filters, a clogged coil, or a worn belt. It can also be symptomatic of undersized or otherwise restricted ducts. Take time to measure and assess airflow. Doing so unlocks a range of diagnostic techniques that find problems often invisible to other diagnostic methods. This helps avoid misdiagnoses that can occur when refrigerant is checked before airflow is verified.



Ben Lipscomb, P.E. is a registered Professional Engineer with project management experience, specializing in commercial/residential HVAC energy efficiency. He's done energy efficiency program design and implementation, policy and regulatory consultation, as well as measurement and verification consultation and much more.

My Journey to Becoming A Local Carbon Monoxide Evangelist

Becoming an evangelist can be a long and often difficult road when dealing with “the Silent Killer,” known as Carbon Monoxide (CO).

In my opinion, every technician who works on fuel-burning appliances (furnaces, boilers, water heaters, gas dryers, gas stoves, etc.) should have extensive training in combustion and carbon monoxide. This training must include:

- Causes and effects of CO poisoning
- Proper diagnostic procedures
- Proper repair procedures
- How to prevent problems from occurring in the first place.

Fortunately, this is exactly what [NCT's Combustion and CO training course](#) covers.

“To be a CO evangelist, you have to test every gas-fired system you encounter.”
— Tom Johnson



THE JOURNEY BEGINS

I was first introduced to this information in March of 2008. Dan Squires of [Vincent's Heating and Plumbing, Port Huron, MI](#), told me about Jim Davis, a trainer from National Comfort Institute, Inc. Squires shared with me what he learned in Davis' class.

He told me that the next class Jim was doing was in Louisville, KY. I have a brother who lives there, so I loaded my two top technicians into my 1994 custom Dodge van -- nicknamed the “Love Shack” — and drove 12 hours to Louisville. After the first day in his class, we were convinced this Jim Davis was crazy.

Why? Between us, my technicians and I had almost 50 years of HVAC industry experience and this guy was telling us many of the things we knew were wrong. We went back to my brother's house and started playing with his furnace. Wow! Everything Jim said was true. It all worked exactly as he said it would.

By the time we made it to day three of the course, our heads were spinning with all this new information.

GROWTH FROM STRUGGLE

By jerks and starts we started implementing this information into our daily practices. One by one, we started tuning our customers' equipment as we now knew was the right thing to do. Unfortunately, we had yet to learn how to correctly charge for our knowledge.

But first things first. I had all my field staff certified through the NCI training (yes, plumbers, too). Each time I sent an employee, I attended with them. I find they seem to score much better if the boss is in class. So, in the past nine years I attended the class 13 times. The interesting thing

is, I learned more each time.

Now, nine years later, measuring and testing is part of our company culture. Every piece of fuel-burning equipment we touch gets tested. We have installed hundreds of barometric draft dampers. We have had reports from customers of 30% fuel savings, based on our doing a proper tune-up. As word spread of our CO successes, we found ourselves the local CO evangelist.

I have been invited to speak at building inspectors training classes. I do a weekly radio show and promote CO safety, nearly every week. Some of our competitors refer people to us to deal with the ‘problem jobs they can't solve. Even some utility people refer customers to us. Furthermore, recently our local newspaper invited me to write an article on CO safety.

STAYING THE COURSE

Success does not happen overnight. First, it required a change in beliefs for me as the owner and general manager. Second, it was a mind shift for my employees. Once they go their heads

“EVERY PIECE OF GAS-FIRED EQUIPMENT WE TOUCH IS COMBUSTION TESTED.”

— TOM JOHNSON

wrapped around it, they brought it to our customers. Our customers now refer us to their friends and the momentum grows.

The most important take away from this is that if you don't start, you will never get there. You must be diligent and persistent. Always base your opin-



Meet Tom Johnson at NCI Summit 2018

High Performance HVAC Summit 2018 is happening March 4-6 in Austin, TX. Tom Johnson is one of six Performance-Based Contractors™ presenting how they Blaze A Trail to High Performance. Johnson, who is the general manager of [TM Johnson Brothers, Inc.](#), Cambridge, MN shares his journey to becoming the go-to expert on solving carbon monoxide (CO) issues in his market area.

You'll learn how to establish your identity, what barriers to overcome, and how to sustain the CO culture in your company. He'll also highlight how to develop an action plan for what you need to know, what your team needs to do, and how to make yourself better known in your community.

Come meet Tom and network with your peers in Austin. Learn more about the Summit 2018 program at [GoToSummit.com](#).

JOIN US FOR SUMMIT, STAY FOR SOUTH-BY-SOUTHWEST MUSIC FEST

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ions on measurable facts, not on hearsay from others. Then learn how to charge for your services to make a profit.

Most importantly, you must believe in doing what is right, safe, and true for your employees and your customers.

Our employees know we help protect hundreds, if not thousands of people in our community. We do this by knowing about CO issues. TM Johnson Brothers is among the few who can fix those issues before they become serious. Our people use that knowledge every day. For me, there is no better feeling than that. I know my customers are warm and comfortable in their

homes. But I also know our company is positively affecting their safety and health. Thank you, Jim Davis, and thank you NCI!

You can learn more about this topic at a breakout session that Jim and I are doing at the NCI Summit in Austin, Texas, March 4-6, 2018. Make plans to be there! We are going to have a blast! I'm sure Jim will have a new joke or two to share as well! [NCI](#)



Tom Johnson is the general manager of TM Johnson Brothers, an HVAC contracting firm in Cambridge, MN.

19 Attributes of a Great Leader

[PART TWO]

Lead by Example

Be Humble

Communication

Share Your Vision

Be Trusting

Have Productive Meetings

Know Your Limits

Have Compassion

Put Family First, Work Second

Have a Sense of Humor

As a Leader, Seek Help

Be a Mentor

The Need to Read

Link Results and Goals

Take Ownership and Action

Learn from the Past

Strive for Improvement

Surround Yourself with Smart People

Serve Others

Last month we began this article talking about the seriousness of the business place. As the leader in your HVAC company, you are responsible for decision-making that impacts its success and failure. Being a leader also impacts the lives of those people who work in the company. Those same people look to you for leadership. Again, this is serious stuff.

So as a leader, how do you know you're doing the right things for the business and your people? What makes a great leader? In this second part of our two-part series, we continue with answering those questions.

Last month we highlighted nine of the 19 attributes which include:

- Lead by Example
- Be Humble, for Real
- Communicate
- Share Your Vision
- Be Trusting
- Have Productive Meetings
- Know Your Limits
- Have Compassion
- Put Family First, Work Second.

If you missed last month's installment, no worries – [just click here](#) and get caught up.

Now let's continue with the final 10 attributes of being a great leader:

HAVE A SENSE OF HUMOR

“Thomas Jefferson once said, ‘We should never judge a president by his age, only by his works.’ And ever since he told me that, I stopped worrying.”

– Ronald Reagan, 40th U.S. President

The business world is a serious place. Think decisions. Think responsibility. Think pressure. Think stress. What better way to take the



edge off than a bit of humor. There are many examples of great leaders using humor to engage others, disarm conflict, and lighten the mood. President Ronald Reagan, Industrialist Henry Ford, and many others have used humor effectively in their leadership roles. A leader with a sense of humor, especially about themselves, appears more confident and attracts confidence from others. It also builds trust, it is memorable, it “spreads” easily, and it sells.

AS A LEADER, SEEK HELP

“A mentor is someone who allows you to see the hope inside yourself.”

– Oprah Winfrey, television personality and business entrepreneur

Finding a mentor whom you trust means having an advisor for those times when things get tough. A mentor is someone you can bounce ideas off of or who may share things you haven't thought of before. They say no person is an island. You cannot know everything. Mentors act as coaches, counselors, and advisors. They are often role models. Mentors are so important that I suggest you read. “Seven Surprising Truths About Mentors,” by Steve Tobak.



BE A MENTOR, YOURSELF

Again, everyone can use a mentor. Winston Churchill said, “We make a living by what we get. We make a life by what we give.” Just as mentors can help you through difficult spots, you can help others. Whether they are budding leaders within your organization, people from within the community at large, or working with disadvantaged youth – you can help people see their own strengths and weaknesses, help them be more productive or teach them more about the industry they serve. You can help them avoid making the mistakes you made. Who knows, in your role as mentor, you may even learn something new.

A GREAT LEADER HAS THE “NEED TO READ”

Every great leader, no matter what the industry or business, does a lot of reading. Management books, self-help literature, and the like will really help in your development. Forbes Magazine contributor Alex McClafferty recommends the following for all leaders'



ILLUSTRATIONS AND PHOTOS COURTESY OF ISTOCKPHOTO

libraries: anything by Peter Drucker “as a foundation, Ray Dalio's management principles for a framework, and finally, Lighthouse for highly actionable leadership tips.”

LINK RESULTS AND GOALS

Want to hit aggressive goals? It doesn't matter if they are sales goals, share of market goals, customer acquisition goals or whatever – incentives should be appropriate for the results team members achieve toward that goal.

According to McClafferty, “A simple way to lock down your incentive is to understand the single most important driver of customer success in your business, then build from that.”

LEADERS TAKE OWNERSHIP AND ACTION

A great leader's “ability to learn, and translate that learning into action rapidly, is the ultimate competitive advantage.”

– Jack Welch, former chairman and CEO of General Electric

Leaders need to relate to their team as if they are the customer. If they point out a problem, the leader needs to solve it. To do that, make sure you understand the problem completely. Then regularly update your team on your progress, and then share with them the solution. This also extends to checking in with the team. Check in with them often. Whether it's to review their performance or yours, taking ownership with regular check-ins builds motivation and helps keep everyone on track.



AS A LEADER, LEARN FROM THE PAST

“Those who cannot remember the past are condemned to repeat it.”

– George Santayana, American philosopher, essayist, poet, and novelist

If you examine the history of business – as does Jim Collins, the ‘Good to Great’ author -- you'll see uncountable examples of successful business models and spectacular business failures. So, here's the challenge: think about what the people you admire do well, and consider what went wrong for those who end their careers mired in scandal or disgrace. Great leaders learn from the past to change the future of their organizations and their lives.

STRIVING FOR IMPROVEMENT NEVER ENDS

“Every day you may make progress. Every step may be fruitful. Yet there will stretch out before you an ever-lengthening, ever-ascending, ever-improving path. You know you will never get to the end of the journey. But this, so far from discouraging, only adds to the joy and glory of the climb.”
 -- Sir Winston Churchill – British prime minister from 1940 to 1945 and 1951 to 1955

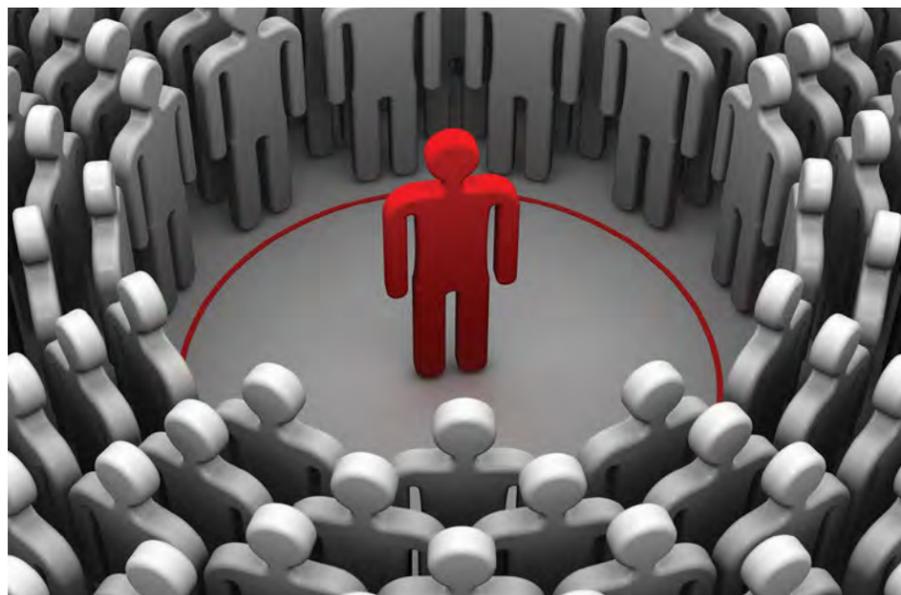
It is said that great people constantly learn new things and always try to improve themselves. There’s always something that you can work on or a new skill to master. Keeping an open mind to new ideas and possibilities almost guarantees you will continue to grow and improve.

Earlier, we talked about the importance of humility in great leaders. Striving for continuous improvement is recognition of humility. It says, ‘Yes, we’re good, maybe very good, and we can be even better.’

SURROUND YOURSELF WITH SMART PEOPLE

“If you ever find a man who is better than you are - hire him. If necessary, pay him more than you would pay yourself.”
 – David Ogilvy, founder of the Ogilvy & Mather advertising agency and founder of modern advertising

Not just smart people – great leaders surround themselves with people who are smarter than they are. Bring these people onto your teams, into



your company, and give them room to grow and innovate.

They will be the ones who take your mission and vision and make them into reality. They will challenge you, but that is a good thing.

What isn’t good is when you surround yourself with “yes-men (and women),” who tell you what they think you want to hear. They won’t challenge you and they won’t really take the company to where you want it to go.

LEADERSHIP IS A SERVICE

“The best way to find yourself is to lose yourself in the service of others.”
 – Mahatma Gandhi, leader of the Indian Independence Movement in 1942

Great leaders seek to serve, not to be served. Leadership should never be about power, popularity, or money. Servant leaders don’t think of themselves as better than the people they lead. They believe in their teams and work to remove the roadblocks that prevent those teams from getting their

work done.

To illustrate, there is a great article published in the April 3rd edition of the Washington Post titled, *Servant Leadership: A Path to High Performance*. Author Edward D. Hess discusses what servant leadership means and why it should be important to anyone running a business today.

IN CONCLUSION

Furthermore, from these tips and from reading the resources cited here, it is very obvious that being a great leader isn’t something you can fake, or learn overnight. From an employee viewpoint it’s obvious when someone is a great leader because they feel inspired and part of something bigger than them. They WANT to work harder and be successful.

By the way, employees can spot “fakeness” from a mile away. It’s something that you as a leader have to truly believe, and truly be passionate about. So as you walk the path of Performance-Based Contracting™, try to see yourself through the lens of great leadership and success. 



*“You gotta be kidding me!
 Only a ‘Bama fan would do that!”*

— Scott Copeland, Affordable Heating and Cooling, Phenix City, AL

This month’s winner fits into the “Bad” category. As you can see, someone installed a heat pump package unit in an attic. Seriously.

Scott Copeland from Affordable Heating and Cooling submitted this entry and is the December 2017 winner of our Photo-of-the-Month contest, as voted on by the subscribers to the [High Performance HVAC Today magazine](#) and visitors to the website. He will receive a \$50 gift card.

You can too – submissions are always welcome. If you’d like to submit a photo for consideration in our Photo-of-the-Month contest, go to [ncilink.com/potm](#) or click below and fill out the information as requested.

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Email us at contactus@hvactoday.com with your comments and questions.

By Dominick Guarino

Why Manufacturers and Distributors Should Support Performance-Based Contractors

The number of High Performance HVAC Contractors in North America is currently estimated at somewhere between 5 and 10% of the industry. This group continues to grow at an increasing rate every year.

HVAC service companies everywhere are increasingly discovering there's a better way to differentiate their businesses, deliver a superior product, take better care of their employees, and make more money. Sound like a tall order? It is. But it's achievable in baby steps, with significant rewards along the way.

There are many forces at work that will help create the perfect storm for measured performance in the months and years ahead. Government and utilities for example, are discovering traditional energy efficiency measures just aren't moving the needle fast enough to reach their goals. Many are realizing the "deemed" approach to efficiency — where credit is given for computer-modeled measures — just isn't cutting it.

While higher efficiencies save energy, they are not getting the expected savings or reduction in peak demand. As minimum cooling efficiencies rise over the next few years, perhaps to 16 SEER or higher, it will be even harder to justify utility rebates on equipment replacement alone.

In California, legislation like Assembly Bill 802 is close to being implemented. This new law could change California's HVAC efficiency landscape as it requires proven reduction in KWs at the meter.

Program implementers will be required to prove savings, and will be on the hook if they don't materialize. They will need quality HVAC contractors to test their work to prove reduced consumption, home-by-home, and building-by-building.

There's an ever-growing mountain of proof that the typical HVAC system only delivers less than 60% of its rated BTUs into the space. Per-

formance-Based Contractors™ know these losses are primarily due to air distribution system issues. They know how to increase delivered BTUs to 85% or more, far exceeding any savings achieved through typical utility program measures. This approach also shaves peak loads, helping utilities avoid building new power plants, or moving energy across the grid to meet peak demand.

What else is in it for manufacturers and distributors? Contractors who properly install, test, and adjust highly performing systems, will make their equipment shine - improving brand value and image.

How should the industry support Performance-



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CONTRACTORS WHO PROPERLY INSTALL, TEST, AND ADJUST HIGH PERFORMING SYSTEMS, WILL MAKE THEIR EQUIPMENT SHINE – IMPROVING BRAND VALUE AND IMAGE.

Based contractors? To start, by supporting the right training. Owners, managers, salespeople, and field staff need as much system performance training and support as they can get.

Manufacturers can also help through consumer education. Through their marketing, they can show how contractors who test performance can fix problems ranging from original installation issues, to deterioration of air distribution systems.

When manufacturers encourage consumers to use contractors who are trained and certified to test, diagnose, and correct HVAC system performance issues, our entire industry wins.

The High Performance HVAC industry is just getting started. If you're not yet on the path to becoming a Performance-Based Contractor, now is the time to get started!

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