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TENURED TECHNICIANS

Bob Latvis of Cox Communications shares his tips for maintaining a tenured field service workforce, p. 12.



DRONES IN FIELD SERVICE

Drones are revolutionizing how this aquaculture operation is mapping growing grounds, p. 16.

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January/February 2018

Cover Feature

ServiceMaster's Digital Transformation

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p. 6

Editor's Notebook

The Key To Customer Satisfaction:
Meeting Customers Where They Are, p. 5.

Peer Perspective

Q&A: Insider Advice On Maintaining
A Tenured Field Service Workforce, p. 12.

Case Studies

Drones Expand
Digital Transformation Efforts, p. 16.

Taking Field Service Mobile
With Micro Apps, p. 19.

Industry Insight

Expert Tips On How To Improve
The Customer Experience, p. 22.

Executive Outlook

Go Paperless And Go Forward, p. 26.

Consultant's Corner

How To Benchmark For Success
In 2018, p. 28.

Analysts' Outlook

There's Nothing Artificial
About Artificial Intelligence, p. 29.

Practical Advice For Implementing IoT, p. 30.

FIELD TECHNOLOGIES (ISSN-1096-3553) Vol. 21, No. 1 is published 6 times per year (January/February, March/April, May/June, July/August, September/October, November/December) by Vert Markets, Inc. at Knowledge Park 5340 Fryling Road, Suite 300 Erie, PA 16510. Phone (814) 897-9000, Fax (814) 899-5587. Periodical postage paid at Erie, PA 16510 and additional entry offices. Copyright © 2018 by Peterson Partnership. All rights reserved. Printed in U.S.A. SUBSCRIPTION RATES: For qualified readers in the U.S.: \$0. For nonqualified readers in the U.S. and all other countries: \$197 for one year. POSTMASTER: Send address changes to Field Technologies, Knowledge Park, 5340 Fryling Road, Suite 300, Erie, PA 16510.

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The Key To Customer Satisfaction: Meeting Customers Where They Are

Sarah Nicastro, Publisher/Editor In Chief,
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On page 6 we delve into an in-depth interview with Jamie Smith, the CIO of ServiceMaster, about the company's quest to maximize the customer experience. The initial part of this process was what Smith calls "customer journey mapping." As ServiceMaster conducted this mapping, it learned that the wishes and demands of customers are not uniform. To maximize customer satisfaction, Smith explains that you have to be willing and able to "meet your customers where they are."

What does this mean exactly? Service organizations are under a lot of pressure to innovate. You invest in a customer portal to offer online appointment booking, but in reality some customers will always prefer to call in. If you resist innovation, you risk losing the business of those customers that want an alternative option to calling in to schedule service. The more customers (or prospective customers) you have, the greater the preferences will vary. Being able to meet them where they are means if a customer wants to call in with an issue, you need to make sure someone helpful answers. If another customer refuses to talk on the phone and wants to book an appointment online, you need to make sure they can do so.

Scheduling Service

When a customer has a problem and needs your help, some will pick up the phone immediately to call, while others will automatically log on to your website first to look for online appointment booking. You may have others who look to see if your company has an app, or even look for an email address to use (depending on the severity of the issue). Are you making it easy for your customers to schedule service in the manner they prefer? This goes a step further than just offering these communication channels to ensuring they work seamlessly.

Ongoing Support

If a customer has a question or needs some information on your product or service, how easy is it for them to obtain that information? If they call in, does someone answer who is able to help them? If they visit your website, can they find product information, a support email, and maybe even support via chat easily? For support requests, some customers prefer social media. Are your customers able to contact you through social media?

Providing Feedback

Feedback is an area of communication that you will need to be more proactive about. Sending post-service communication in multiple methods (phone, email, app) can help you get the feedback you need. That said, customers are far more likely to proactively provide feedback when they have a negative experience — in those cases, you want to make sure they are readily able to voice their concerns, and follow up with them immediately to offer a resolution.

You need to make it your priority to know your customers well enough to determine what channels of communication are crucial for your company to offer. But it is safe to say that a multifaceted approach is necessary, and that providing options is key to achieving high levels of customer satisfaction in service.

Sarah Nicastro

ServiceMaster's Digital Transformation

by Sarah Nicastro

ServiceMaster Global Holdings is a 90-year-old, Fortune 1000 company providing residential and commercial services, and operating an extensive service network of more than 8,000 company-owned locations and franchise/license agreements as the parent brand of Terminix, Merry Maids, American Home Shield, ServiceMaster Restore, ServiceMaster Clean, Furniture Medic, and AmeriSpec. With \$2.74 billion in revenue, ServiceMaster has 13,000 employees, 33,000 independently employed franchise employees, and 15,000 home-service contractors employing 50,000 service technicians.

Customer-focused digital transformation leads to double-digit NPS gains.

Through its various brands, ServiceMaster puts a truck in the driveway of a home or business 75,000 times per day. The company's mission, while simply stated, is anything but: Leverage digital technology to deliver a consistent and positive customer experience across all of its brands on each of those 75,000 service visits a day. As you can imagine, ensuring a consistent

customer experience across this massive of an operation is a major undertaking — and one for which ServiceMaster recognizes the need for mobile technology is crucial. “The only way you can achieve the goal of ensuring a consistent experience 75,000 times a day is through mobile and digital technology that really starts with how we engage our customers, all the way from the delivery of service to billing,” says Jamie Smith, CIO of ServiceMaster.

Smith is leading ServiceMaster's digital transformation journey and is responsible for technology used across the company's various brands. Like other service organizations, ServiceMaster is faced with the pressures of increasing customer demands. “Customer expectations are increasingly being driven by the ‘digital native’ companies across all industries. Once customers see the way a company like Uber operates, they start to expect the same degree of transparency, immediacy, and lack of friction in all experiences,” says Smith. “Customers live in what Google calls ‘micro moments’ where they sense a problem or need and expect to immediately be able to take action to solve it. If we aren't meeting them where they are and providing a category-defining experience, then we are creating an expectations gap.”

The Struggle To Modernize

The struggle for today's field service organizations is finding logical, appropriate, defendable, and rapid ways to rise up and meet these mounting customer demands. While technologies abound to enable the digital transformation, there are a variety of factors at play for most field





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Jamie Smith, CIO, ServiceMaster

service organizations that make that transformation very difficult, including bandwidth struggles, outdated processes and operating models, lack of financial resources, and a multitude of competing priorities. But the reality is, your customers are the ultimate determining factor of your success, so the quicker you can find your path to meeting and exceeding their demands — like ServiceMaster is — the better off your company will be.

According to Smith, he looks to digital native companies to see what they are doing and to get inspiration for ServiceMaster’s journey. “We look across industries to see who is creating memorable experiences from the digital natives like AirBNB, Zappos, and Amazon to more traditional companies like Disney. Safelite is a great example of a company that consistently delivers great field service at scale. I also like to look at interesting startups that take ideas of fresh takes on home services that push what we believe is possible,” he says.

The goal is to take these ideas, along with a good understanding of customer needs, to create an experience that drastically improves upon the historical home service experience. “Sadly, in home services the average customer experience has historically been inconsistent at best,” says Smith. “Customers are left with questions of if the service technician will show up, if they’ll show up on time, if they’ll be prepared to get the job done, etc. If you’ve taken off work or are planning your life around this visit, those questions are frustrating.” With customers that

have become accustomed to an Amazon or Uber-like experience, it is up to service organizations to innovate and modernize.

Step One: Understanding Your Customers

The first step to meeting – and exceeding – customer expectations is to understand just what those expectations are. “When we started our transformation, we wanted to make sure that we directed our dollars to fixing the parts of the experience that mattered most to the customer. We took the approach of mapping both the customer and service provider sections of the journey, and everywhere they directly interacted,” explains Smith. “This helped us see — with data, not anecdotes — where we needed improvements, and more specifically which improvements would achieve outcomes the best. The least productive thing we could ever do is spend a lot of time optimizing something the customers didn’t care about.” In going through this customer journey-mapping process, ServiceMaster was also able to develop a score card that would be used to measure tangible progress as improvements in the experience were deployed.

To simplify what ServiceMaster found, the most consistently lacking aspects in a service experience are transparency and communication. Savvy customers of today want the ability to access service in the method that’s most comfortable for them and to have insight into the progression of the job. Leaving customers to wonder if/when a service technician is going to show up and if/how they’ll

get the job done is no longer acceptable to the majority of today's consumers.

"We need to make sure we can meet the customers where they are," explains Smith. "What I mean by that is that some customers will want to interact with us via phone. Some want a seamless self-service process, and the mobile phone has become sort of the remote control of people's lives today. However they choose to access our service — mobile, web, phone — we need to be there and be very quick and effective in our interactions through those channels."

In addition to being available to interact with customers in the methods they prefer, ServiceMaster knew it also needed to be more proactive in its communication with customers. The goal is to provide customers with more visibility into the service process, including pre- and post-service touch points. Smith points out that customers crave communication and insight, and that when you're providing them, they can serve as a buffer if an issue should arise. "Customers can really be pretty forgiving as long as you're communicating with them," he says.

In the customer journey-mapping process, Smith learned that it's important to avoid the habit of looking at the customer experience from the inside-out and to really think of the experience from the customer's perspective. He shares an example from the American Home Shield brand: "AHS replaces a huge number of appliances each year. When a specific model of refrigerator, for example, is no longer available we go through the process with the customer of matching features, dimensions, colors, etc. to find the closest acceptable match. At the end of the day, the customer has a new appliance covered under home warranty — great outcome. But unfortunately for the customer, the process of getting that new appliance was taxing on the customer and added both time and friction to the process. By focusing on the customer experience — versus our own — we were able to transform this process into something far more enjoyable that felt more like online shopping for the customer. We still had the same positive experience, but were able to modify our processes so that the customer experience was positive as well."

Smith suggests looking for these potential "major dissatisfiers" throughout your customers' journey to identify areas of possible friction and frustration that need to be resolved. You can then build steps

into your digital transformation to eliminate these dissatisfiers and provide a more positive experience. As Smith points out, the mission to transform has to be based first on the customers' needs and wants — it cannot be driven by organizational goals or technology. "It's not necessarily a technology story, really — it's more a story about meeting customers' needs," he says.



What The Digital Experience Looks Like

With a deeper, richer knowledge of the customer journey, ServiceMaster set out to incorporate that knowledge into its mission of providing a consistent, positive experience across each of its brands. "We took this insight and made it the common thread across our brands," says Smith. "I view it like buying something on Amazon. No matter which merchant actually sells the goods, I know it will arrive in a smile box with Prime shipping and the Happiness Guarantee. We've worked to enable a universal experience across all of our brands with the baseline expectation of that same 'happy path.'"

To achieve this feat, ServiceMaster is leveraging Dispatch, a platform dedicated to "solve the communication gap between enterprise brands, third-party contractors, and the consumer." Service technicians access the Dispatch app via iPhones. When a customer initiates a service visit through a call to ServiceMaster or online, the job is created and sent to the technician via the Dispatch app. When the technician receives the job, it is scheduled with the customer, and information is provided on the task that will be completed.

From there, Dispatch enables ServiceMaster to make touch points with the customer. This includes a pre-service touch point that can be a phone call, text, or email depending on customer preference. This allows customers to list any special requests and to make sure the expectation is set as to when the service technician will arrive. From there, customers are able to track the technician on his or her way to their home, in an Uber-like manner. Customers can even sign up for notifications when the technician is en route, almost there, etc. Upon completion of the job, there is an immediate post-service touch point asking “how satisfied were you with your service?” with a one through five star rat-

customers with a tracking number on the spot so that, again, they are always informed and the process is transparent. “Our job is really to help the service technician who is in that home to be a hero,” says Smith. “Equipping them with all necessary information keeps the communication and transparency with the customer flowing, which is crucial.”

A Shift In IT Operating Model

For this project to be a success, ServiceMaster knew the solution needed to be easy for the technicians to use. “We want service providers in the field to have tools in their hands solving customer problems versus struggling

to learn a new phone system. The speed of change and nature of a distributed workforce demand that the applications are simple and require no formal training. We need using the application to feel familiar, and simplicity is a must,” explains Smith. “Dispatch has proven it can be used to quickly onboard providers across a wide range of devices and trades via an easy self-service setup process. Additionally, when we roll out new versions or features, on-screen,



ing. ServiceMaster has a real-time data stream of these responses and when a low rating is received, action is taken immediately to save that service experience.

“Before, we were only collecting feedback days after the service visit,” says Smith. “We still do that, to collect more detailed input, but this five-star ranking provides a significantly higher response rate because the service has just occurred. It also gives us that opportunity to take immediate action when needed. Hours matter. Minutes matter.”

ServiceMaster has also enabled a variety of payment options in the field, including being able to take a picture of a check, to streamline the payment process for customers and eliminate that as a friction point. Technicians can order parts in real time and provide

guided tutorials are available in context.” Dispatch also provides extensive data on which features are being used and which parts of the application are creating user frustration so that ServiceMaster can work to optimize the technicians’ experiences.

Smith joined the company almost four years ago on the heels of six years’ worth of attempts to get a traditional CRM/field service software project underway. He knew the company needed to change its IT operating model as the digital transformation began, and ServiceMaster moved to a “scaled agile” framework, in which it runs roughly 10 software deploys a day. “It’s been an evolution of how we work and what we deliver,” he says. “The journey to agile began out of the necessity to move faster and deliver more. While I



“Once the employees realized this was a tool to help them perform their jobs better, and that we would truly listen to their feedback, they really started to accept and embrace change. A lot of people try to lean away from change. We’ve tended to lean in to change, and we’ve seen really positive impacts from that.”

Jamie Smith, CIO, ServiceMaster

think everyone tends to focus on the messy, iterative nature of agile, what we found most transformative was simply making all work visible across the organization. Also, the move to smaller, self-contained, and self-organizing teams has fostered a culture of focusing on business outcomes instead of technical deliverables.” Whether you think an agile approach is for you or not, the idea of “creating a culture focused on solving customer problems versus simply delivering a new IT system” is one worth paying attention to.

Even with a simple solution, change is never easy. Smith’s advice is to make sure what you’re introducing is worthwhile, and if it is, adoption and acceptance will follow. “While change is always challenging, especially in a field workforce, we have found that success comes down to one simple principle — whatever we roll out has to be superior to the previous alternative,” he says. “For instance, when we rolled out the ability to take a photo of a check in the field for customer payment, we were amazed at how quickly it was adopted. When we dug in, we realized just how painful taking physical checks had been for our field technicians. They had to collect the check, get it back to the branch office, ensure it was matched to the proper customer account, have the check mailed to our processing center, and if everything worked properly, five to seven days later it would post to the customer account. While the app we rolled out required a few extra keystrokes, it avoided that whole process and posted checks immediately. If it makes life easier, the field will adopt it.”

Smith also cautions against underestimating your field force’s ability to embrace your company’s digital transformation. “A lot of people believe the field force cannot accept change,” says Smith. “We’ve rolled out 15,000 iPhones to our technicians this year. We’ve dropped a new version of the app every couple of days with new functionality. The field’s ability to consume and appreciate change is tied directly to them seeing their suggestions actually make it into the real world. These aren’t all tech-savvy people. But once

the employees realized this was a tool to help them perform their jobs better, and that we would truly listen to their feedback, they really started to accept and embrace change. A lot of people try to lean away from change. We’ve tended to lean in to change, and we’ve seen really positive impacts from that.”

Digital Transformation Leads To NPS Gains

The positive impacts ServiceMaster has seen since embarking on its digital transformation journey include far better insight into operations, customer satisfaction improvements, and improvements in on-time arrivals. “I used to say when we dispatched a job, it was like the old Apollo days – where the spaceship went behind the moon and into a communications blackout. We didn’t have any visibility into what was going on until either an invoice was submitted saying the job was done, or we had an angry customer calling us saying someone never showed up,” says Smith. “We’ve really boosted our communication with the customer and the technicians, and we have far more visibility into operations as a result.”

Since the solution was rolled out to its Terminix brand, ServiceMaster has seen double-digit NPS (Net Promoter Score) improvements across most branches. Some of the branches had up to a 47 percent gain in NPS. Terminix has also experienced a 15 to 20 percent increase in on-time arrivals.

Digital transformation is a never-ending journey, and ServiceMaster is continually working to refine and evolve the solution. “We are working on refining our scheduling systems, as well as rolling out the ability for customers to very easily and efficiently manage their communication preferences,” says Smith.

If you’re reading ServiceMaster’s story and feeling overwhelmed about where you stand in comparison, Smith urges you to start where you are. You don’t have to get from A to Z at once, but you have to begin to get somewhere. “An 80 percent solution today is far better than a 100 percent solution three months from now,” he says. ●

Q&A: Insider Advice On Maintaining A Tenured Field Service Workforce

Publisher/Editor In Chief Sarah Nicastro talks one-on-one with Bob Latvis, regional VP of field operations at Cox Communications, on keeping techs happy.

Cox Communications is a privately owned, American subsidiary of Cox Enterprises providing digital cable television, telecommunications, and home automation services in the United States. Bob Latvis is the regional vice president of field operations at Cox and has been with the company for 30 years. In his role, Latvis leads regional residential and commercial field operations and network reliability, accounting for over \$1.3 billion in annual revenues.

I spoke with Latvis recently about Cox's focus on customer satisfaction (keep an eye out for another article on that soon!), and one of the aspects that

came up in our conversation is just how crucial the field technician is in the customer's experience. In a field service business, success with customer satisfaction lies almost entirely in the field technician's hands — therefore, focusing on the knowledge, training, and job satisfaction of your field technicians is very important.

One of the accomplishments Latvis is most proud of in his current role at Cox

is the tenure of his field service team. The average tenure of the field technicians in Latvis' region is just under 11 years (10.56). Latvis understands that keeping his field technicians engaged and happy in their jobs is key to Cox's core mission of providing a great customer experience, and he has some tips to share with you on how to maintain a tenured field service workforce.

Nicastro: In your words, explain the importance of field technician engagement and job satisfaction.

Latvis: What I've seen through my 30 years in field service operations is that there is a direct correlation

between job satisfaction and customer satisfaction. The higher the morale or the higher the job satisfaction, the more engaged people are in ensuring that the customers have a positive interaction.

The positivity of happy employees comes through in our technicians' actions and words with our customers. It's contagious almost, this positivity — it makes the customer feel like they're making a good purchase or decision to come on board with us as a subscriber, because the employee is so engaged in what they're doing.

I personally spend extra time finding the level of engagement our people have. Are they engaged? Are they satisfied? Are they committed compared to just compliant? That's kind of the key that I'm looking for: commitment versus compliance.

I'm a big believer in the "manage by walking around" philosophy, formally and informally. I will join technician meetings just off the cuff, do ride-outs, go with technicians on customer visits, organize one-on-ones with technicians, even though there are about 600. I can't meet with everybody, but I'll do larger-scale focus groups as well where no topic is off limits and we can talk about anything they choose, work-related or industry-related. I want to be viewed as somebody that is very transparent with where we are as a company and what we are doing to improve our customer relationship and our employee relationship.

I think companies fall into a trap of overlooking employee satisfaction because it's often viewed as just "you're paid to do your job, so just do your job." Too much emphasis is put on the extrinsic motivation or compensation — and companies feel the techs should be happy just with what they're getting paid. Not enough effort is put into empathy, the appreciation of the skill it takes to do their job, and focus on the mutual purpose that you serve, whether it's in an executive role or a technician role.

We all serve the customer, and from what I've seen, when technicians see that the senior leadership is engaged at that level, they know that their going the extra mile makes a difference. Rather than the

bob latvis



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regional VP of
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Cox Communications
www.cox.com

mindset of “Hey, you’re getting paid well. Just do your job,” it should be, “I care about you as a human being, and I want you to be successful.”

Nicastro: We discussed how important communication and transparency are in building and maintaining relationships with your field technicians. What are the most successful methods of communication that you use, and what are some examples of using transparency?

Latvis: The most successful method by far is in person, whether that’s in town hall-type meetings or focus group meetings or individual tech team meetings. It’s having the dialogue and having open dialogue, where both sides of the story are told. Whether you’re telling a popular story or an unpopular one, the key factor is that you’re explaining the reason why.

When folks feel that you are being honest with them, whether they agree with the message or not, it’s accepted much better. If you aren’t transparent in your communication, you leave room for speculation and suspicion — the opposite of loyalty and engagement.

If there is any message to be told or something that’s going to affect or impact a large group of employees,

we make sure that the message is delivered at an intimate level: smaller groups of people having the interaction, and certainly asking for and listening to feedback. The message doesn’t change, but exploring the “why” behind the conversation is important to the employee.

You also need to ensure feedback is acted upon. We keep an action item list and, as questions come up, we have either a white board or a flip chart where questions and feedback are documented for everybody to see, along with who owns the follow-up and the date by which we’re going to follow-up.

This process ensures we maintain our credibility. Whether it’s an answer people want to hear or they don’t want to hear, it’s an answer that we committed to and followed through on, and employees respect that. If you ask for feedback and don’t follow through, the next time you find the room shuts down. When you really need their feedback, people just won’t even bother because it’s like, “Why bother? Nobody’s listening anyway.”

That said, you also need to clarify ground rules about what you’re going to act on and what you’re not. You have to tactfully let employees know that nonconstructive or unrealistic input won’t be addressed.

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“Too much emphasis is put on the extrinsic motivation or compensation, and companies feel the techs should be happy just with what they’re getting paid. Not enough effort is put into empathy, the appreciation of the skill it takes to do their job, and focus on the mutual purpose that you serve.”

Bob Latvis, Cox Communications

Nicastro: That’s great input, but face-to-face communication won’t always be an option. What have you found works best when you can’t talk to techs in person?

Latvis: We have done video messaging, and it’s OK. It’s still more of a push of information out, but those are more effective than mass email blasts with four or five different topics on it.

If you’re not doing in-person communication, you need to limit the amount you’re going to be sharing at one time. You can’t pack four or five different topics in an email — it has to be very specific and targeted. If you put together a monthly newsletter and put 30 things in it, by the time people read the second article, they’re done.

Keep it narrow, keep it specific, keep it targeted, and add a human element to it as well. That will ensure that attitude you’re trying to convey in a face-to-face comes through.

Nicastro: You mentioned that your directors conduct monthly one-on-one meetings with managers, who conduct one-on-one meetings with supervisors, who conduct one-on-one meetings with each field technician to discuss performance and create individualized development plans. This is a major investment of time, but you feel it is worth the payoff — can you explain why?

Latvis: We’ve seen it be successful because it shows that the leader is engaged in that employee’s continued development, whether that’s into leadership, to make them more technically astute or competent, increasing their financial acumen, or making them a more marketable employee.

Having a really good individual development plan increases that employee engagement. It shows that the company’s invested in their future. Time put into

these one-on-ones is another demonstration that we want you here for the long haul, not for a one- or two-year spin. We want you to plan your career with us. Secondly, it also allows us to identify talent for succession planning. When we talk about succession planning, we say, “OK, which technician on their individual development plan said they’d like to go into leadership?”

Lastly, it builds another level of loyalty. You’ll find that when you need to call on people to go the extra mile, there’s goodwill you’ve created by investing in them and their long-term career. They’ve not forgotten. It’s not something you hold over their head, but it’s a memorable experience for them, so when the company calls on folks to go the extra mile, there’s never a push and pull. It’s always, “Sure, where do you need me to sign up?”

Nicastro: We spoke about the importance of leaders being relatable. Why do you feel this is important, and how can leaders accomplish this?

Latvis: It’s very important because the technicians need to have a feeling that you really understand what they do. The more credibility you’re able to bring to the table, the more effective you are. I’m a firm believer in that, because I’ve seen it backfire tremendously, like with folks coming from other companies with big titles. People can be very relatable without having done the job; they just have to have really good people skills.

You’re just not accepted “just because.” You have to build that relatability, meaning I can empathize with you because I understand what you go through every day. It builds rapport, and it builds an environment where people will open up to you because they trust you.

In order to be successful, you have to show your

humility. Even though you may be the vice president and you're coming in to a bunch of technicians, be humble. Be willing to listen and not be the biggest voice in the room. Just be there as a sponge. Think of it as asking for help in your own development. When you show that vulnerability and you're comfortable with that, people embrace that. You don't have to have street credibility; you can build your credibility up by saying, "I need your help to be successful."

Once you're relatable and people are comfortable approaching you, they can really help you with your business problems or even your business strategy. Because they have a direct pipeline to your customers, they see them every day and talk to them every day — they are gold mines of information of what our customers think of us. They'll tell you how to improve your business because they trust that you are interested in what they have to say, because they can relate to you. Where they may see four or five things that could really improve your business, they may not approach you because they could be afraid or be scared that you would take that as criticism versus "Wow, your idea could really save us time, save us money, could improve our customer satisfaction."

Anyone can create a compliant work environment, but doing so will give you the bare minimum of performance. If you work toward creating a committed environment, you'll get much more because people are committed to doing a great job versus just compliant to doing the bare minimum.

Nicastro: How can a company effectively use compensation to promote job satisfaction and retention?

Latvis: Pay for performance is paramount: You reward the people based on merit, not solely based on a completion of a task or time. Secondly, you need a variable pay component to allow people who want to go above and beyond the opportunity to make more money as well. Variable pay doesn't have to be just straight-out monetary; it can be gifts and prizes and contests and things like that. The idea is, as long as there's a carrot out there, folks will stretch to obtain that.

The other thing is, you have to pay a fair market value for the skills that field service does. I say that because the science of what field service is has changed so dramatically over the past five, 10, 15 years. You're now competing with trades, shipbuilders, plumbers, things along those lines — this is a career.

The third component would be a really good career path that shows, along with base and incentive compensation, what does the career growth look like?

Nicastro: What are the three biggest mistakes you see companies make in how they treat their field technicians?

Latvis: The first step is that they need to break the stereotype that field technicians are one-trick ponies. I say that to mean that they only have one specific task that they do, repeated over and over again. In field service in today's world, you have to be multidimensional and be able to problem solve several different items or products or consumers at one time.

Secondly, people don't put enough emphasis on the people/communication skills that the field service technician needs to have. I would make that the priority. The most important thing is focusing on the communication skills. These folks are truly the face of your company, representing you. It's a mistake to undervalue the need for these folks to be excellent communicators. Listening skills are just as important as communicating the total value of the service that they're providing.

Lastly, you must understand that your field technicians are the ambassadors of your brand. Whether that is working for a customer, whether it's driving around town, or whether it's walking through 7-Eleven with their uniform on, these folks have a tremendous presence in the community. They are walking billboards, and that's why it's so important to invest in your field service people as complete employees, because they're going to come in contact with the community every single day, hundreds of times a day. You want to invest in them and their skillsets, their career desires, because they can make or break your customer loyalty any day of the week, if they want to.

Nicastro: If you were to summarize your best advice for maintaining a tenured field service force, what would it be?

Latvis: The key comes down to making yourself accessible. I'm a realist, so I understand the email box is filling up left and right, and you've got your financial statements you need to look over, and you have your business priorities you need to track down. But you have to make yourself accessible so people see you as somebody that is really invested in them and their job experience, whether it's in larger groups, whether it's walking through the parking lot, or whether it's walking through the smoke shack. Hey, a lot of stuff gets said at the smoke shack! You want to be a regular there. You want to be part of the grapevine.

That happens by making yourself accessible and not "Oh, no, here comes Bob." It's just you walk up and people know you and keep talking, even if it's about the Yankees last night, let your ego go. Let it go. You're not all that important. It's much more important to understand what's on the minds of the people who are talking to your customers than it is to think how important you are. ●

Drones Expand Digital Transformation Efforts

The use of mobile apps is saving this aquaculture operation hundreds of hours of data entry per year.

Taylor Shellfish Farms is a fifth-generation, family-owned aquaculture operation based in Shelton, Washington. The company has steadily expanded the scale and scope of its operations over the years since beginning in 1890 with just one farm. With the next generation, it expanded into processing. More recently, it has added hatcheries and its own oyster bars to sell products directly to customers. The company currently employs more than 500 people to grow shellfish sustainably on more than 11,000 acres of leased or owned tide land

The collection of this data from each farmer is essential to understanding what variables make good shellfish and what variables can negatively impact shellfish and the farm itself (and ultimately yield and revenue). Until recently, all of this information was collected manually. Each farmer would take notes, which Taylor would collect to try to analyze and determine what was working and what wasn't.

The Search For Automation Begins As Regulatory Pressures Mount

Beyond the desire to better understand farming conditions and practices to maximize shellfish output, Taylor is also faced with many layers of regulation. "We are heavily regulated because we operate our farms in waters of the state," explains Erin Ewald, assistant director of environmental and regulatory compliance at Taylor. "We have federal, state, and local regulations, as well as a lot of sustainability practices we have to comply with. These layers of regulation require a lot of accurate and supporting data — and that data can't be collected in silos; it needs to be collected and shared in a timely manner to be able to be analyzed."

Taylor's manual processes of using Excel spreadsheets and farmers writing in paper notebooks worked adequately when the operation was small, but as the operation has grown, so has the need for an effective system to catalog, analyze, and share the data. When Ewald joined Taylor in 2014, she had experience from her previous role with Esri and quickly identified the need for a similar system to address the shortcomings of Taylor's manual processes.

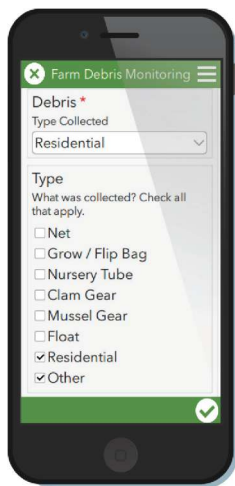
Ewald helped launch the company's digital transformation with a formal proposal for the use of Esri's suite of GIS to map and manage the company's farming sites, analyze farming conditions, identify the best growing areas for

Taylor uses Esri Survey123 for ArcGIS to create multilingual sustainability surveys in English, Spanish, and Khmer (the Cambodian language) to help make the necessary regulatory data collection a habit for diverse crews.

and owns and operates four oyster bars in Seattle.

The journey of each shellfish starts in the hatcheries where Taylor breeds oysters, clams, mussels, and geoduck. These "seeds" are then planted on its many tidal

beaches, are stewarded until maturity, then harvested and processed before finally being distributed. Each type of shellfish at Taylor farms requires a varied approach to management — each having a different growing cycle, requiring different types of land, and so on. Taylor relies on its farm managers to take very good notes on all of the information related to the shellfish's care and maturation (for instance broodstock, rainfall, growth rate, predators, heat, and gear effectiveness).



“We have federal, state, and local regulations, as well as a lot of sustainability practices we have to comply with. These layers of regulation require a lot of accurate and supporting data — and that data can’t be collected in silos; it needs to be collected and shared in a timely manner to be able to be analyzed.”

Erin Ewald, Taylor Shellfish

various shellfish species, and conduct surveys to meet environmental requirements. The company began the project in the fall of 2016.

Digital Transformation Begins With Smartphones And Mobile Apps

Taylor chose to utilize a handful of Esri’s GIS mobile apps to enable the collection of real-time data on business, operations, and environmental conditions from its farms. The company uses Collector for ArcGIS to gather all operational data from each of its farms, which is now beginning to replace the paper notebooks and Excel spreadsheets the farms were keeping to track information. “The field is where our use of Esri is really hitting its stride,” says Ewald. “With Collector, the farmers can easily document all of the information we need not only for compliance, but for really cataloguing what’s working or not working for the shellfish. The farmers can take photos and upload them immediately in the app, and the app provides a real-time flow of information we’ve never had before.”

The data gathered using Collector is used to better evaluate the status of various farms, enabling Taylor to evaluate an amount of information that was previously only in the minds of farmers. Farmers currently use a combination of company-provided iPhones and Android phones with the app, but Taylor plans to evaluate iPads and rugged tablets for their larger screen size and greater functionality for team meetings.

Explorer for ArcGIS provides offline editing capability that is crucial for the farms in rural areas with spotty cell signal coverage. Explorer also provides a repository for data and attachments. For instance, Taylor can store permits here that the farmers can easily access to show

to fish and wildlife inspectors when they come around.

Taylor uses Survey123 for ArcGIS for its regulatory compliance needs. The company has created multilingual sustainability surveys in English, Spanish, and Khmer (the Cambodian language) to help make the necessary regulatory data collection a habit for diverse crews.

To achieve a successful rollout of these apps in place of the manual notebooks, Taylor worked hard to gear them specifically toward the needs of the farmers. “We put effort into making sure the apps meet the needs of the users — that they are easy to pull up, easy to use, easy to submit data to, and that they meet the requirements of the information each farm wants to track to manage its operations,” says Ewald.

Taylor assured the apps would meet farmers’ needs by sitting down with a lot of them to understand their wishes before the development of the apps had even begun. “Before rollout, we sat down with users to ask what information they wanted to collect, what their technical skill level was, how we could make this work best for them,” explains Ewald. “We really tried to ensure that the information we needed for our business and compliance was met while the farm directors’ and managers’ information needs they’d identified were met as well.”

Taylor took the insight gleaned from these meetings into the app development. When the apps were ready, each department was invited to receive in-depth training for new users or those who weren’t as comfortable with the introduction of mobile apps. For new employees or those interested, Taylor wraps additional mobile app training into monthly trainings already occurring (safety, HR, etc.).

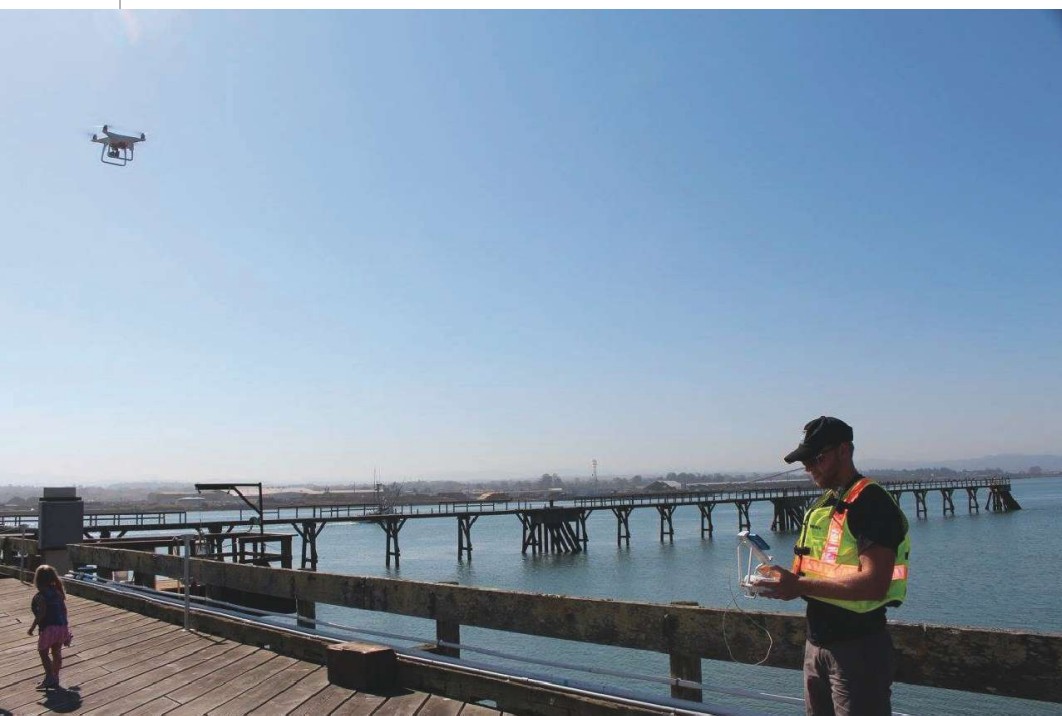
Case Study

Mobile Apps Promote Compliance, Efficiency

From a regulatory standpoint, the apps help to ensure compliance and make reporting far simpler than with the paper-based methods. The audits are structured in a way that ensures the necessary data points won't be missed, which wasn't always the case with paper. "The mobile apps will help us meet our international and regulatory standards to a higher degree, with more complete data. As we grow and our regulatory obligations expand, we must support a robust

input data as it's observed. They can easily add photographs or notes, and they have all of the documentation and information they may need about previous crops at their fingertips," says Ewald. "I'd guess that this next year, with 200 farmers in the field, we may save a couple hundred hours — if not more — just by allowing our farmers to farm and not have to transcribe paper notes into the computer."

The integrity and breadth of the data gathered from farms is stronger, too, since it's being collected in real-time through the mobile apps.



Erin Ewald of Taylor Shellfish says of the company's use of drones: "I truly believe drones will revolutionize how we're able to map out and fully utilize a bed to its maximum potential. Having boots on the ground is most certainly valuable. But a birds-eye view, like we've never enjoyed before, will help us more effectively assess and affirm farm management and have a stronger confidence in inventory projections. I think the use of drones will really help the company grow."

This gives Taylor executives far greater business intelligence about the farm operations than existed before, and these insights lead to better inventory planning, budgeting, and sales forecasting for the business.

method to comply or we run the risk of a potential business shut down. If we were still using journals and Excel, there would be so much room for error — and we'd have a difficult time meeting our regulatory obligations," says Ewald. "Furthermore, being able to provide regulatory data digitally is so much faster than digging through paper or Excel sheets."

Beyond the regulatory factors, the use of mobile apps has helped Taylor operationally in many ways. This mobile solution leads to more efficiency for farmers because their method for collecting the data is faster. "Limiting office time and maximizing efficiency in the field where data is fresh to input critical farm information while on the tide is so valuable. Our people are able to

Drone Use Is A Major Area Of Opportunity

Taylor has also begun to use Esri's Drone2Map for ArcGIS solution. "Drones have been beneficial in mapping out new beds. Using these machines, we can map out tidal elevations and evaluate critical areas and property functions. We really have a unique opportunity to look at the bigger picture of what's going on," says Ewald. "I truly believe drones will revolutionize how we're able to map out and fully utilize a bed to its maximum potential. Having boots on the ground is most certainly valuable. But a birds-eye view, like we've never enjoyed before, will help us more effectively assess and affirm farm management and have a stronger confidence in inventory projections. I think the use of drones will really help the company grow." ●

Taking Field Service Mobile With Micro Apps

This equipment dealer has replaced paper work orders with micro apps integrated directly with its ERP.

Titan Machinery owns and operates a network of full-service agriculture and construction equipment dealerships. The company has more than 2,500 employees working from nearly 120 locations across the United States and Europe. Titan's business includes the sale and rental of heavy equipment, as well as the sale of whole goods and the service of purchased equipment. Service revenue is a focus area for Titan due to the high profit margins it provides, and the company recently underwent an effort to modernize its service processes in an effort to maximize this revenue.

Titan had recently completed a lengthy ERP upgrade and realized it needed a method to extend mobile capabilities to its 335 field service technicians. "We sat back and thought — okay, this doesn't make much sense. We invested all of this time and money in our ERP, and here our service technicians are still doing all of their work on paper," says Rick Keller, director of business applications at Titan. Some of Titan's field technicians would be in the field for days or even a week or two before bringing their paper job notes back to be manually entered into the ERP system.

The Desire For DIY

Titan realized that a mobile solution would reduce delays and increase accuracy, but the company didn't want to endure another lengthy development process. "After five years of building an ERP system, we were tired of paying consultants and wanted to find something we could handle internally and build and manage ourselves," explains Keller. "We wanted to take a DIY approach because we knew it would be more cost effective. We'd have the ability to quickly adapt to changes, whether those are adjustments that may be identified during the pilot process or fine tuning during use of the app. We wanted the control to be able

to make changes as we wished."

While Keller knew he preferred a DIY approach, the company needed to evaluate its options. Titan evaluated a few different software vendors and also talked to its internal developers about creating a software solution from scratch internally. Neither option seemed the perfect fit, so Titan



For Titan Machinery, one of the biggest pros of the Capriza micro app solution was that the development of micro apps requires no technical expertise. "Capriza's platform isn't geared towards IT users. It's actually better for business users," says Rick Keller, director of business applications at Titan.

kept looking. Keller found a company called Capriza while doing an online search, and Titan decided to investigate the company's offering.

Capriza is an application platform that enables companies to create their own micro apps that provide anytime, anywhere access to data and workflows from ERP/CRM applications. Titan contacted Capriza, and Capriza offered to perform a proof-of-concept. The proof-of-concept showed Titan exactly how one of the mobile micro apps

by Sarah Nicastro

“I felt that if we didn’t roll out mobile apps that were simple, then we didn’t do our job. Think about it — how many times have you downloaded an app from the app store and then needed to be trained on it?”

Rick Keller, Titan Machinery

would be created, and, after seeing it in action, Titan’s team was confident this solution was the best fit for the company.

Capriza allows Titan to quickly create micro apps on top of its business applications, without coding or APIs. The micro apps are attached to business applications directly through the browser, which was appealing to Keller because of the security aspect of nothing being stored by Capriza. The tradeoff, however, is that the micro apps won’t work without connectivity. “We evaluated the pros and cons of this and realized that there are some areas of the country we can’t use it,” says Keller. “But overall, for us, it hasn’t been a big issue, and the pros of the solution were far greater.”

One of the biggest pros of the solution for Titan was that the development of micro apps requires no technical expertise. This enabled Titan to achieve its DIY approach without having to start from ground zero. “Capriza’s platform isn’t geared towards IT users. It’s actually better for business users who have a solid understanding of how the existing business application works,” says Keller. “My colleague and I were responsible for creating the micro apps, and neither of us has a technical background.” Capriza spent a week initially training Keller and his colleague on how to use the solution, and at the end of that week they were capable of building apps.

Titan started with developing some basic micro apps that addressed the core functionality the company wanted to provide its field technicians — including work orders, time tracking, parts availability, and customer signatures. “As we began creating apps, we learned as we went how to do more advanced things,” says Keller. “Capriza also offers support, so we had a stand-

ing weekly call to ask questions and could also contact them as needed.”

The Value Of Simplicity

Titan’s field technicians were already equipped with smartphones in the field — both iPhones and Android phones, although the company is in the midst of standardizing on Android. Once the micro apps were ready to roll out to the field techs, Keller says the process was easy. “I felt that if we didn’t roll out mobile apps that were simple, then we didn’t do our job. Think about it — how many times have you downloaded an app from the app store and then needed to be trained on it?” he says. “The onus was on us to make sure the mobile apps were simple and easy to use so that our field workers would actually utilize them. Micro apps were ideal because they are built for one specific function.”

Keller again likens this to your experience as a consumer. “When I use an app, it’s for one or two very specific things. The micro apps we’ve created work the same way. There’s an individual micro app for each function of work our employees need to do — it makes it easy for them to navigate through their days, and all of the information is tied in to our ERP.”

Titan kept training to a minimum — the company distributed a simple sheet that showed field technicians what they could expect to see on each of the micro apps. Because each app integrates directly with the ERP, they use the same user name and password, and information syncs automatically. The field technicians (or other employees using the apps, like delivery drivers or sales employees) see a dashboard of micro apps when they log on and can choose what function they need to use.

Titan currently has 20 micro apps in production, and it took about four months to develop them all. “Some apps were developed in as little as a day. Our micro apps range from our Parts Locator app, which allows field technicians to quickly determine whether needed parts for repairs are available and at what store they are located, to our Tech Timeclock app that lets our field technicians log their project hours and notes in real-time and in the field. We also built a Delivery and Pickup Order (DPO) app which captures signatures on equipment delivery for compliance on revenue recognition, giving us the ability to process the sales faster and therefore capture cash faster. Other apps include our Requisition Approval app to maintain necessary inventory levels and our Price Adjustment app for approvals for sales discounts. All of these apps have helped streamline field processes and purchasing approvals, ultimately enhancing operational efficiencies among our field technicians, delivery field teams, and sales and operational teams,” explains Keller.

Keller reports that employee feedback on the micro apps has been positive. “Our workforce

has been very happy with the micro apps. Our field technicians can enter time for a project in real time, instead of writing down their hours with pen and paper and having a supervisor enter their time into our ERP system. In the first four months of the use of our DPO app, we saw an 80 percent adoption rate; our goal with this app was to be at 60 percent within a year.”

Are Micro Apps Right For You?

If you’ve considered a DIY approach but don’t want to start from scratch, here’s Keller’s take on whether micro apps might be your solution. “My opinion on the micro app is that it makes it easier to focus in on precisely what the user needs to do. Many software solutions have capabilities beyond what you need, and that can complicate things. Micro apps keep it simple,” says Keller. Oftentimes simple solutions lead to higher levels of adoption.

Titan is in the process of piloting ways to use the micro apps to interface directly with customers. “We’d like to enable our customers to use the mobile app to connect with us directly, for things like requesting a rental,” says Keller. •

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Expert Tips On How To Improve The Customer Experience

Author and customer experience futurist Blake Morgan gives practical advice on how to better meet the growing needs of your customer base.

Improving the customer experience has moved up the ranks as a top strategic initiative for most field service organizations. In fact, according to our 2017 year-end special report, *The Future Of Field Service*, improving the customer experience is a strategic priority for 71.8 percent of field service leaders. To me, this statistic illustrates how far the field service industry has come — and where it is headed. We've moved beyond the phase of just "cut costs, cut costs, cut costs" to really understanding that how we are addressing our customers' needs is the real key to success. In other words, most field service organizations have conquered the shift in mindset from service being a cost center to a profit center.

A recent Field Service study from WBR Insights, *Connecting Satisfaction with Next Generation Field Service Technologies*, echoes this finding. The report showed that improving customer service is not only a priority but also the greatest pressure facing field service companies for the next 12 months. In fact, customer satisfaction is shown to be a relevant metric for more companies than any other metric in the study.

This data is echoed in all of the interviews I've conducted recently with field service leaders about the projects underway within their companies. You'll see in ServiceMaster's story on the cover this month that the company's entire digital transformation effort is focused on how to give its customers what they want, how they want it. Next month's cover story with National Grid will mirror some of the same goals — to modernize the way service is provided in an effort to improve the customer experience. This focus isn't going anywhere, because it's the root of how to measure your success or failure as a service organization.

I like how a recent Gartner report stated that "Customer experience can be the multiplier or rate limiter of business results." So we know customer experience is a critical field service focus area, but the challenge is that it isn't an easy one to address

and improve upon. In fact, it's a multilayered issue that involves first understanding what it is your customers want, next determining your operation's current strengths and weaknesses in addressing those demands, and only then developing a systematic approach for making improvements that will have a positive impact. It isn't an easy feat, but it is a crucial one. While some companies are blazing the trail on how to do this well, many other companies recognize the need for improvement but struggle with the strategy for making a change.

Blake Morgan is a customer experience futurist and author of the book, *More is More: How The Best Companies Work Harder And Go Farther To Create Knock Your Socks Off Customer Experiences*. Blake contributes to *Forbes*, the *Harvard Business Review*, and the American Marketing Association. She is the host of "The Modern Customer Podcast" and a weekly customer experience video series on YouTube. In other words, Blake is a customer experience expert! I've enjoyed reading Blake's insights and advice for improving the customer experience and asked her to join us to share some of her customer experience wisdom here with you.

Nicastro: Field service organizations — like many other companies — struggle with balancing immediate pressures with their long-term strategy, where customer experience typically falls. What advice can you provide on finding the right balance and how to get buy-in on a focus area that doesn't produce instant payoff?

Morgan: There is a McKinsey framework called the Growth Horizons Framework — this framework encourages businesses to spend 70 percent of their time on expanding the core — which means focusing on their "bread and butter" products and services. Twenty percent of the time should be spent on expanding the core (expanding the "bread and



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“The board is often so focused on quarterly dividends it isn’t supportive of the CEO making long-term customer investments — so the company never has the chance to see if improved customer experience results in stronger financial performance.”

Blake Morgan, Author

butter” offerings), and 10 percent of the time should be spent on transformational growth — these are new industries or completely different products and services that are mostly foreign to what the business currently does.

The thing is, most companies spend most of their time simply running their business; however, businesses should spend most of their time on transformational growth. If the company is dragging along with little innovation, it is in trouble. The balance should be a major focus on disruption and innovation — and customer experience is a big piece of that. In truth there is never a perfect balance, but if the company is not pushed to move forward, the business will ultimately grow stale.

Nicastro: Most field service companies know that improving the customer experience is important but struggle with turning their “knowing into doing.” For a company looking to improve customer experience, what’s the best starting point to take action?

Morgan: The best starting point for companies is to understand what the customer’s perception of the brand is. By listening to structured and unstructured data, brands can better understand what the biggest pain point is for customers. That’s a great starting point — to address the biggest headache for your customers. And in time you can address every headache that needs addressing. Listening will tell you everything you need to know about your customer experience — and that includes listening to frontline employees who deal with customers all day and know more than most.

Nicastro: How would you summarize the most common customer wants/demands that a company should strive to meet?

Morgan: Today’s customers expect you to know them. Customers today demand personalized and tailored interactions; however, they often don’t get that. If you can be the company that takes the time to understand who your customer is, perhaps you can meet their needs in real-time and anticipate what they need next.

Nicastro: What are the areas where companies tend to fall down — the most common customer experience-related failure points?

Morgan: The most common customer-related failure point is the board and the CEO not seeing the opportunity. The board is often so focused on quarterly dividends it isn’t supportive of the CEO making long-term customer investments — so the company never has the chance to see if improved customer experience results in stronger financial performance. Sometimes it requires a leap of faith and patience.

Nicastro: What are the top technologies that are playing a part in improving customer experience?

Morgan: Personalization, the customer experience cloud, and decisioning/data technology (AI) are all strong players.

Nicastro: Any closing thoughts or words of wisdom?

Morgan: If you take even one small step to improve your customer experience, you are on the right path. You can start today to gain an understanding of what your customers think of your brand’s customer experience. A powerful way to find out is to ask your frontline employees and, of course, your customers. You can learn more by checking out Blake’s course on “Building Better Customer Experiences: An Introduction” at www.customerexperienceschool.com. •

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Go Paperless And Go Forward

The costs of using paper are higher than you think.

Do you know what you're spending on paper? Most likely, it's more than you think. Paper-intensive companies may be surprised to discover how many unrecoverable dollars fly out the door for paper-related expenditures, including paper, stamps, storage, labor, and capital expenses. Not to mention circulation and management of paper-based processes, which are often slow and could possibly diminish overall employee productivity.

Ask yourself:

1. What is the average number of forms completed by your field workers each day?
2. How many miles does a field worker typically travel in a day to traffic work orders?
3. How long does it take for a field worker to travel to the home office to deliver paper work orders?
4. How much time is spent completing paper forms correctly?

It's evident how paper-dependent organizations struggle with spiraling costs, chronic inefficiencies, and errors and have little flexibility in their workflows. We help companies go paperless and, in turn, boost ROI.

The Benefits Of Going Paperless

Crossing the "paperless" threshold and implementing a seamless automated process management system is the

direct action for eliminating the cost of paper and paper-related products. It helps reduce manual processing of documents, improves business processes, and enables organizations to scale with minimal growing pains.

Companies wanting to make their organizations more competitive and run more efficiently will see immediate benefit upon implementing a paperless system. Employees are more productive. Information is easily accessed, shared, and managed. Meeting compliance with HIPAA or Sarbanes Oxley, for example, becomes easier.

Companies that have gone paperless have reported:

- Reduced mailing, postage, and shipping costs: A paperless solution cuts costs associated with docu-

ment delivery to and from customers or vendors. Files are transmitted instantly.

- Improved personnel utilization: A paper-free process management system boosts employee productivity. No more looking for old or lost files. No more time spent making copies.
- Lower equipment expenses: Going paperless eliminates the need to purchase and maintain expensive printers and fax machines. This further reduces labor and operations costs while also freeing up valuable office space.
- Simpler storage solutions: Substituting electronic repositories for filing cabinets helps eliminate long-term storage space issues and creates room for growth.
- Improved workflow: Paperless automation makes it easier to manage high volumes of orders, documents, and invoices. No more getting lost in the paper weeds.
- Fewer reporting errors: Having the ability to quickly scan, classify, recognize, validate and verify data reduces errors, eliminates rework, and drives productivity.

Additionally, companies that go paperless may also realize "soft dollar" benefits that lead to intangible savings and/or growth opportunities. These include but are not limited to better customer service, environmental savings, improved security and compliance, disaster recovery protections, increased market share, higher employee retention, and the ability to bring products to market faster.

Paperless Is The New Way Forward

If you haven't gone paperless yet, now is the time. Paperless systems offer untold benefits and a positive return on investment. Reducing paper-based costs equates to a direct increase in profitability, long-term cost savings, and greater efficiency. Converting reports, invoices, POs, as well as single and multipart preprinted forms into paperless documents, saves time and improves customer relations. Paperless systems also allow issues to be resolved more quickly and keep your organization from getting bogged down.

We look forward to continuing this conversation at Field Service USA on April 19th for Track C: Service Innovation, "Don't be a Paper Pusher: #GoPaperless to Reduce Operational Costs and Accelerate Processes" at 2:50 p.m. •

tom bright



Tom Bright
CEO,
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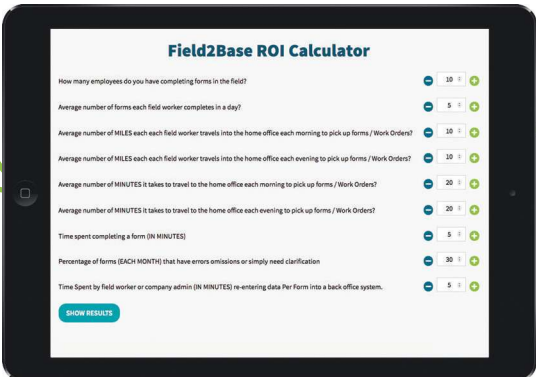
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The image shows a tablet displaying the 'Field2Base ROI Calculator' interface. The interface has a white background with a black border. It contains several input fields with dropdown menus and a 'SHOW RESULTS' button at the bottom. The inputs are: 'How many employees do you have completing forms in the field?' (set to 10), 'Average number of forms each field worker completes in a day?' (set to 5), 'Average number of MILES each field worker travels into the home office each morning to pick up forms / Work Orders?' (set to 10), 'Average number of MILES each field worker travels into the home office each evening to pick up forms / Work Orders?' (set to 10), 'Average number of MINUTES it takes to travel to the home office each morning to pick up forms / Work Orders?' (set to 20), 'Average number of MINUTES it takes to travel to the home office each evening to pick up forms / Work Orders?' (set to 20), 'Time spent completing a form (IN MINUTES)' (set to 5), 'Percentage of forms (EACH MONTH) that have errors omissions or simply need clarification' (set to 50), and 'Time Spent by field worker or company admin (IN MINUTES) re-entering data Per Form into a back office system.' (set to 5). There are green leaf icons on either side of the tablet.

Field2Base ROI Calculator	
How many employees do you have completing forms in the field?	10
Average number of forms each field worker completes in a day?	5
Average number of MILES each field worker travels into the home office each morning to pick up forms / Work Orders?	10
Average number of MILES each field worker travels into the home office each evening to pick up forms / Work Orders?	10
Average number of MINUTES it takes to travel to the home office each morning to pick up forms / Work Orders?	20
Average number of MINUTES it takes to travel to the home office each evening to pick up forms / Work Orders?	20
Time spent completing a form (IN MINUTES)	5
Percentage of forms (EACH MONTH) that have errors omissions or simply need clarification	50
Time Spent by field worker or company admin (IN MINUTES) re-entering data Per Form into a back office system.	5
SHOW RESULTS	

field2base.com/roi


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How To Benchmark For Success In 2018

Is your service certifiable?

Benchmarking is an effective management tool to help an organization evaluate how well it is performing relative to other similar operations or to compare its organization with a recognized industry standard. Benchmark results highlight where an organization is doing well and where the organization needs to improve compared to the other groups participating in the benchmark. The three areas of focus are baseline (minimum performance, no worse than others), acceptable (meets industry standards or compliance), and best in class (exceeds the standard and is a consistent high performer).

The most common benefit for adopting a benchmarking program is to use it as a tool to drive continuous improvement. Some of the triggers for benchmarking include:

- Quality program - ISO9000, Six Sigma, Service Capability & Performance (SCP) etc.
- Operations improvement efforts
- Management change
- Re-evaluating strategies
- Competitive positioning.

An area of caution when relying on benchmark data to make important business decisions is to determine how

the data was collected, what the process was, and whether it is accurate. In many cases, benchmark data is obtained through online surveys and uncorroborated research studies. The responses are generally users' perceptions and, consequently, the resulting data is somewhat suspect, i.e., garbage in, garbage out.

The recommended method for collecting benchmark data is to perform a physical audit,

whereby all performance data can be verified. This is a well-established practice in the financial, tax, and other regulated industries. Field service benchmarks most commonly focus on performance. Typical examples would be customer satisfaction survey results, on-site first-time fix, field engineer utilization rates, MTTR (mean time to repair), service requests/day/field engineer, etc. While it is useful to compare your metrics with peers', it is equally important to compare management practices and detail service delivery processes and outcomes. Benchmarking, if applied correctly, is the first step in a service quality and improvement program that includes:

1. Benchmark to baseline your organization and compare your performance to industry

2. Determine where the gaps are in performance and create an improvement plan
3. Establish new goals and measure to track performance to achieve objectives
4. Implement an improvement plan and monitor performance
5. Review and continuously improve and benchmark against "best in class."

There are industry-recognized standards and quality programs to assist you. The most well-known quality standard is ISO 9001:2008. It provides guidance in establishing a formal quality system and places an emphasis on process documentation. The ISO standards also focus on ensuring processes are executed but do not specifically define "what" the processes should be or which business areas they should cover.

Six Sigma is another quality improvement methodology that defines a specific method of measuring success. The program can be used to drive targeted improvement efforts and measure the outcome of those efforts through the Sigma measurement, expressed as "Defects per Million Opportunities." While results are expressed in manufacturing-oriented terms, organizations have been able to translate this expression into service-related measures. Benchmarking is generally used at the beginning of the process to establish baseline performance levels. Six Sigma does not identify which areas of an operation should be improved. In addition, there is no organizational assessment or certification.

The most prominent standard and certification program of its kind for service and support organizations is our Service Capability & Performance (SCP) standards. These standards were developed in 1998 specifically to address issues affecting technology service and support operations, and they currently establish specific criteria across 250 business practices and four service disciplines. In addition, the SCP standards provide detailed audited benchmark data and include over 500 sample industry best practices to assist companies in improving their service operations. An independent audit is available to verify compliance with the standard, whereby the company will earn SCP certification and can use this to market its service excellence.

If you have made a serious New Year's resolution to improve service in 2018, start by benchmarking your operation to understand baseline performance and then select one of the industry-recognized quality programs to create a roadmap to drive service improvement. The investment is low, as this initiative won't require any technology; however, it will require full engagement of your staff and active change management to be successful. ●

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There's Nothing Artificial About Artificial Intelligence

Is AI ready for field service prime time?

The global field services community is always looking for “the next big thing” to impact field service management (FSM), and most research analysts (including myself) are far too willing to debate whether things like 3-D printing, wearable technology, or Augmented Reality (AR) are merely new technology “fads” or, rather, transformative technologies that will ultimately (and quickly) change the face of field service forever.

Whenever a new technology (or a new application for existing technology) is introduced, the initial discussions may range from “It will be the best thing since sliced bread” to “It will never be accepted by the marketplace.” Most, fortunately, find their way into the ability to support the increasingly expansive functionalities of today’s (and tomorrow’s) FSM solutions. Technologies like AR have already established a strong foothold in field service, both as a stand-alone platform, or integrated with Virtual Reality (VR) into a Mixed Reality (MR) platform.

However, the one “new” technology for which there is virtually no debate, even among the industry’s diverse research analysts, is Artificial Intelligence (AI). For that matter, you can also include Machine Learning (ML) in this category. What makes AI and ML so different from most of the “new” technologies we have talked about in the past is that, first and foremost, neither one is really a “new” technology. The term “Artificial Intelligence” was first introduced in 1956 at an academic conference. However, it was not until 1961 when mathematician Alan Turing (the lead character in the movie, “A Beautiful Mind”) wrote a paper on the application of machines to “simulate” human beings and their ability to perform intelligent tasks — initially to play chess!

Fast forwarding to today, we see just about every services analyst writing about AI and ML. For example, analyst firm Gartner included both AI and ML among its “Top 10 Strategic Technology Trends for 2017,” stating that “AI and machine learning have reached a critical tipping point and will increasingly augment and extend virtually every technology-enabled service, thing, or application. Creating intelligent systems that learn, adapt, and potentially act autonomously rather than simply execute predefined instructions is a primary battleground for technology vendors through at least 2020.”

Further, Gartner “advises CIOs to look at areas of the company that have large data sets but lack analytics. AI can provide augmented intelligence with respect to dis-

covery, predictions, recommendations, and automation at scale” — a perfect fit for field service.

However, research firm Forrester believes that “There is still a lot of AI progress to be made before machines can truly understand and guide next best actions” and that “Robots and AI will replace 7 percent of U.S. jobs by 2025 [i.e., 16 percent of U.S. jobs will be replaced, while the equivalent of 9 percent of jobs will be created — a net loss of 7 percent.]”

UK-based firm iTouchVision cites the following four areas where it believes AI will likely have the greatest impact on the field service segment in the coming years:

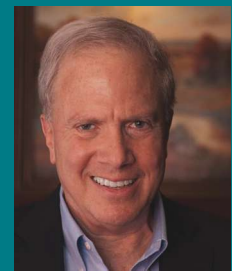
Customer Experience: Primarily through the use of chatbots, “It will be possible to help customers with more speed and accuracy. These bots containing the customer and their equipment information can find out the problem and suggest a quick fix.”

Work Productivity: AI overcomes the hurdles faced by manual dispatchers. In the near future, we may also see the replacement of human dispatchers with an AI virtual assistant that considers all the service event parameters including unexpected events. It increases the job completion rate on the first visit by ensuring the worker has the right tools and skills.

Predictive Maintenance: Predictive, rather than preventive, maintenance is “the way to increase an asset’s life and quality. The machine-to-machine interaction and the connected devices drive predictive maintenance. It eliminates the unnecessary technician visits to check machine condition.”

Data-Driven Decisions: “AI is all about data. With AI, it is possible to make strategic decisions. Reduced repetitive administrative work allows human operatives to focus on predictive analysis. It governs end-to-end work and data flows with automation. Continuous data evaluation and processing present a clear picture with analytics.”

Overall, AI (and ML) are certainly not “artificial”; nor are they simply current fads or trends that will eventually bite the dust. They are real and, as such, should be carefully and quickly considered for incorporation into your field services management solution. ●



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Practical Advice For Implementing IoT

Important considerations if IoT is on your field service road map.

It is hard to imagine any segment of the field service industry that will not be affected by IoT (Internet Of Things). If you can see what's happening, then you can anticipate what may happen next. IoT allows manufacturers to collect real-time data related to a system's reliability and maintainability. This enables them to be more precise in managing their service resources, resulting in a leaner, more efficient service operation. IoT also provides manufacturers with a vehicle for offering premium-priced services like remote monitoring and diagnostics, automatic replenishment of consumables, and proactive service management.

The Challenges With IoT

Despite its enormous benefits, field service leaders face many challenges to implementing IoT. Questions often exist as to whether they should implement IoT on their existing installed base or only on new product releases.

Applying IoT to an existing installed base may seem like a time-consuming and arduous task. However, the benefits are significant. Also, FSOs are often not sure how they will make sense of all the data collected from IoT or how they will ensure that actionable results can be achieved from this information. More importantly, many field service leaders are concerned that they must overhaul their entire service delivery processes prior to taking

advantage of IoT, despite the fact they may have invested millions of dollars in their existing infrastructure.

Companies that implement IoT solutions often do so within the context of Digital Transformation (DX) initiatives. These initiatives typically involve a complete redesign of the service model. While they have a positive impact on the customer experience and shareholder value in the long run, they may be counterproductive to the near term objectives of field service leaders to support their customers' installed base on as an efficient and productive basis as possible. This is because DX initiatives require corporate buy-in, multifunction coordination, dedicated investment capital, and considerable time

to implement, whereas field service leaders are more pragmatic and want results now.

The best approach for field service leaders is one that enables them to implement IoT in parallel with larger, corporate DX initiatives. By doing so, FSOs can realize short-term gains within the context of serving their current installed base using the FSO's existing infrastructure and service business model. This approach reduces the requirement to redesign the entire business model and postpone the realization of results that are possible through IoT.

Field service leaders can think of this transformation as "a walk before you run" approach. It requires field service leaders to think of IoT as moving from a reactive service model to a conditional, prescriptive, and finally a predictive service model. Reactive service is the modus operandi of most of today's FSOs. Service is provided when the customer acknowledges they have a problem and requests a solution. Conditional service represents the next phase in the transition to IoT. It uses IoT technology to monitor the customers' installed base and provides alerts to the FSO that service is required. This enables the FSO to be responsive to customer issues, ensure first time fix, and minimize downtime. A prescriptive model is one in which the alert includes a recommendation or instruction about what action the FSO should take next. Predictive service goes one step further. It monitors the customer's installed base to anticipate service events and take corrective action before they occur, thus avoiding downtime and eliminating operating costs and overhead from the service operation.

The best time for FSOs to think about implementing IoT is when they are replacing or upgrading their field service management software. Perhaps the requirement for IoT alone is the primary reason why an FSO would want to upgrade or replace. Assuming this is the case, FSOs are advised to seek out software vendors who offer IoT as part of a complete solution. This will minimize the number of moving parts (e.g., vendors, applications) that need to be included in the solution. This in turn will lead to reduced implementation costs, an efficient process, and fewer headaches for the FSO. In addition, it will ensure that the IoT solution works within the context of existing service delivery processes and procedures and not the other way around. ●

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A woman wearing a blue knit beanie with sunglasses on top, a light blue and white outdoor jacket with a "CASCHER" patch, and dark pants is kneeling on a rocky shore. She is holding a rugged tablet computer with both hands, looking at the screen which displays a map or data. In the background, there is a large, snow-dusted mountain peak and a body of water.

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