Scaling remote monitoring:
Lessons from five successful pioneers

A whitepaper by Michael Moran of Microshare

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By Michael Moran

Executive Summary

For five pioneering Pest Management Professionals (PMPs) who embraced remote monitoring at scale for rodent control, sales growth, an expansion of margins and customer retention are lasting benefits of their decisions. Driven by creative new marketing and pricing schemes, these five PMPs improved their use of labor resources and experienced demonstrable improvements in the service they provided, including their ability to resolve problems before and after infestations took root. In this white paper, we explore the steps taken by each to integrate this technology with their business models, to train and retain more capable technicians and to win market share with a superior service that satisfied customers and differentiated their offerings. While all five cited challenges and initial internal skepticism as they began their journey, all of these PCPs report that that early challenges were overcome and, as remote monitor became the foundation of their rodent control operations, the benefits cited above only grew as their organizations perfected and scaled this new, modern, digital approach. Each one of them agreed that:

- Moving away from traditional bait box and rodenticide deployment strategies improved outcomes, lowering overall rodent activity and allowing more time for technicians to diag nose causes, and upsell preventative measures that brought in new revenue;

- The switch to a 24/7 model allowed hardware and data costs to be absorbed into a pricing scheme that reflected this superior "white glove" service, and in some cases, were mitigated by a change from one- or two-year contracts to three years and more;

- There are large, well-funded industries who quickly see the value of remote monitoring technology and are willing to pay a premium. These industries, including food production and distribution, pharmaceuticals, high-end restaurant and hotel chains, hospitals and more, often face strict regulatory requirements or are acutely sensitive to the damage that rodent sitings or negative media coverage can have on their reputation and customer loyalty;

- Customers had a large appetite for the data provided by remote monitoring, which demon strated a more timely and effective intervention ultimately reduced rodent activity. This data allowed for a new level of engagement with customers seeking to prevent problems and manage risks;

- After initial resistance, particularly among older technicians, the workforce eventually em braced the new technology, which relieved them of persistent back-breaking manual labor and gave them a better understanding of customers and their rodent control goals, problems and expectations;

- Routing improvements based on activity data brought lower fuel costs, less wear and tear on trucks and equipment, and significant savings on rodenticide and the costly licenses often required to certify those deploying it. Rodenticide could be now deployed when needed rather than universally.

- The ability to deploy sensors outside of bait boxes and snap traps provided a new level of insight onto activity on customers sites in areas where bait stations would not be possible, often pointing to previously unsuspected areas of rodent traffic, harborage and egress.

Introduction

Pity the pioneer, the restless inventors, the brave early adopters. Not all wind up in the history books, on the front page of the Wall Street Journal or even in comfortable retirement. It took a while for Carl Benz to convince his fellow Bavarians in 1886 to get down from their high horses and try his new invention, a gas-powered auto-carriage. Or what about Franz Reichelt, regarded as the pioneer of what would become the extreme sport of base jumping? In 1912, the so-called "Flying Tailor" jumped from the Eiffel Tower to test his wearable parachute, which failed to deploy. Reichelt fell to his death.

For many such innovators, blazing the path is its own reward, and if you should happen to cure a disease or transform an industry, so be it! Happily, there are no reported fatalities amongst the hearty souls who embraced the revolutionary concept of remote monitoring as a means of improving modern rodent control. Like Benz and Reichelt, the Wright Brothers and James Keep, inventor and patent-holder of the first real snap trap in 1879, the innovators featured in this white paper grasped the potential improvements that digital technology – properly configured and deployed – could bring to the control of rodents and safeguarding of public health.

Despite the frustrations of the first generation of not-ready-for-prime-time products, these PMPs persevered, testing and driving improvements in First- and Second-generation remote monitoring arrays and solve the challenges of integrating this new technology into a modern Integrated Pest Management (IPM) program. By doing so, they have left a roadmap for future PCOs seeking to emulate them and to harness the enormous performance, financial and environmental benefits of adopting remote monitoring at scale. To a man, they warn, this isn't necessarily easy. Bringing even a thriving Pest Control business into the digital age involves moving away from tried-and-true methods like universal rodenticide deployment and manual bait station inspections. It means moving past the way station of First-Generation Bluetooth or WIFI-connection to true, cloud-based remote monitoring at scale.

That roadmap is detailed in this white paper, along with stories of trial and error, advice on how to evolve business that is already in flight, insights on pricing strategy and staff training, and testimony to the amazing outcomes their risk-taking produced: Expansion of margins, profits and market share, a more effective, happier workforce and truly satisfied, stable and growing customer base.

Digitally secured food processing facility with EverSmart Rodent

1 Rodent Box Trap/Monitor
Total: 25 on site perimeter

2 Rodent Box Trap/Monitor
Total: 21 on building perimeter

3 Rodent Box Trap/Monitor
Total: 21 on building interior
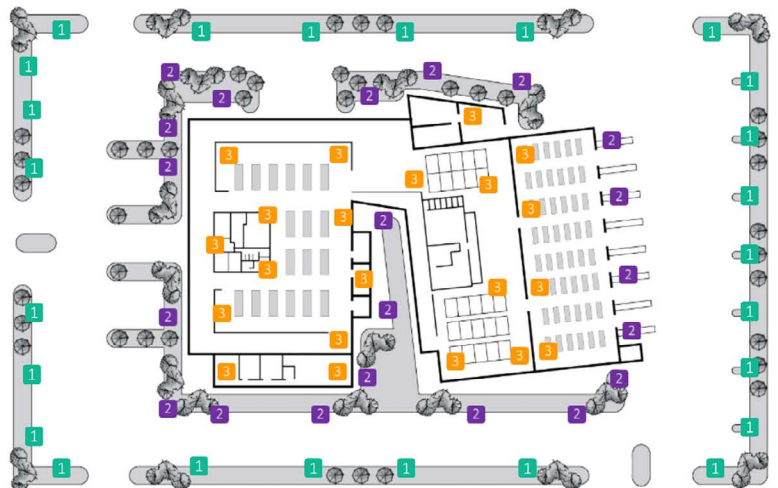
The Visionaries

Microshare, whose Third-Generation EverSmart™ Rodent product is driving many of these success stories, reached out to five innovative early adopters who have demonstrated the ability to successfully scale remote monitoring across large, establish Pest Control businesses and to get the results that early advocates always predicted but sometimes failed to achieve.

The five pioneers are spread out throughout the United States and Europe, running or working for mid-sized Pest Control firms whose growth, margins, profits and market penetration began a sharp trajectory once they integrated remote monitoring into their rodent control offerings. (See Appendix I for full biographies).

> 'If you're not monitoring when you're trying to control pest populations, you're not fully practicing Integrated Pest Management.'
>
> *Dr. Bobby Corrigan describing his deployment of EverSmart™ Rodent sensors all over America's largest metropolis.*

Most of them describe similar motivations for taking the plunge: A curiosity about new technologies, a desire to differentiate their offering from the competition, the lack of visibility they had into the causes of sudden rodent surges, and a general frustration with traditional Pest Control methods.

"We were wasting so much time that could have been better spent," says Jonathan Boyar, Founder and CEO of Ecologic Entomology in Boston. "Let's say we gave a tech an hour and a half to handle a monthly visit to an account. They're going to spend that bending over and checking 200 bait boxes? Guess what: that's not Pest Control. That's Pest Control theater."

Put another way by Marc O Connor, Head of Pest Control for Elis SA in Ireland and Northern Ireland: "The way we were doing pest control, checking bait stations, roaming around from site to site on monthly schedules, hadn't changed much in two thousand years," he says.

Along with Boyar and O Connor, we also spent time with John Moore, Technical Director of FSS out of Indiana, Kevin Thorn, President of Thorn Pest Solutions of Alpine, Utah, and Scott Broaddus, VP of Expansion at Hawx Services in Apex, North Carolina and a driving force behind Bayer's Second-Generation Remote Monitoring System (RMS). Together, these pioneering PMPs have deployed tens of thousands of sensor-armed bait stations and transformed the operations and financial performance of their respective firms. All of them focused on seizing upon the diagnostic capabilities that the sensor data provided to exploit new revenue opportunities, redirecting labor once yoked to the repetitive manual task of checking bait stations to offer new services, from exclusion work to prevention to dashboard data analysis sessions for customers focused on reputational risk or regulatory audits.

Why remote monitoring?

'We tried many systems, the Bell Bluetooth® solution and others. They're really Dead-On-Arrival, in my opinion. What's the point if you have to get so close to it to get the data? Remote monitoring like EverSmart lets us know from our office what's going on at a customer site. That's where the value is.'

Jonathan Boyar, Principal, Founder, Ecologic Entomology

Not surprisingly, each of our visionary PMPs came to remote monitoring in slightly different ways. For some, experience with early versions of the technology proved cumbersome or too expensive or simply did not deliver the benefits promised by over aggressive marketing campaigns.

"What attracted me to it was it seemed at the time a solution to what I perceived to be a real fundamental flaw in the pest control industry," says FSS's Moore, who has helped grow the remote monitoring business in FSS's Upper Midwest territory from $1 million to $4 million annually in the past several years. "The pest control industry was nothing more than a commoditized trap checking service to meet a compliance needs that manufacturers and processors had. To call it pest control, or IPM, was just incredibly misleading."

Moore says he was convinced that some his largest and most rodent-sensitive customers, including globally recognized brands in food production and distribution, would be happy to pay more for a technology that could intervene as soon as problems arose rather than after trouble impacted their supply chain or, God forbid, hit the media.

"So much of the Pest Control technicians' efforts – and it's not their fault because that's how they were trained – doesn't prevent anything, or solve anything, and it doesn't reduce risk. So, I thought: Remote monitoring. We're going to embrace it."

In about 2017 and 2018, many of these early adopters had settled on one or another particular solution: ActiveSense, a Second-Generation[i] remote monitoring system then on the market, was embraced by Moore at FSS, Boyar in Boston, Thorn in Utah. The product, then sold by the Corteva Agri-Science. was relatively expensive and proprietary and had a battery that, once expired, could not be replaced. "It wasn't really ready," says Moore.

Boyar at Ecologic Entomology admits being an early skeptic. "I'm no different than anybody else that will soon see the light. I was slow to adopt this new technology. A friend of mine who owned a bigger company here in the Boston market, kept saying, 'Jonathan, you have to keep an eye on this remote monitoring thing." And he was right.

THREE GENERATIONS OF SMART TRAPS

Proto 'smart traps'   **20th Century**

Electric mouse killer	1947
Hall Electric Mouse Trap	1967

First generation 'smart traps'   **2000-2018**

First real 'Smart" traps but no remote intelligence capability or ability to retrofit existing trap inventory. BlueTooth® or (cyber-unsafe) WIFI connectivity limits commercial potential.

Rob Zoe Rat Zapper	2000
Futura Emitter® snap trap	2006
Bell iQ BlueTooth® bait station	2009

Second generation 'smart traps'   **2018-2021**

Harnessing LoRaWAN® connectivity reduces cyber-risk but price, proprietary hardware and lack of flexibility remain an impediment to scaling. False positives remain an issue.

Corteva ActiveSense*	2016
Skyhawk Trapmate*	2017
Green Trap Online	2021

Third generation 'smart traps'   **2022-**

Cloud-based learning, ability to retrofit to existing bait boxes inventory and use outside of boxes. AI-driven sensing, lower cost.

EverSmart™ Rodent	2021

> 'We tried many systems, the Bell Bluetooth® solution and others. They're really Dead-On-Arrival, in my opinion. What's the point if you have to get so close to it to get the data? Remote monitoring like EverSmart lets us know from our office what's going on at a customer site. That's where the value is.'
>
> *Jonathan Boyar, Principal, Founder, Ecologic Entomology*

Boyar at first deployed 100 ActiveSense boxes around the city and he immediately saw cost and labor savings, as well as a huge leap in what he see going on at customer sites without even going there. "I said to myself, 'this technology is allowing us to learn things that aren't in the textbooks. And we're seeing we're observing behaviors and we're observing changing behaviors in rodent behavior. That's notable. I signed up.

For Scott Broaddus, the Eureka moment came in the midst of a 14-year career at Bayer Crop Science. In 2018, he completed his MBA with a focus on business innovation. "I was hyper focused on the role that Internet of Things (IoT) solutions could play in service industries, the disruptive innovation potential. Remote monitoring is exactly that and I see it happening today, and even though I'm not at Bayer any longer, I wanted to be at the front end of that revolution. It is going to change everything."

Marc O Connor at Elis came at the problem from the standpoint of his training as an electrical engineer. "I didn't come originally from a Pest Control background and electrical engineering is always very innovative, always looking for the next big thing." O Connor, who has deployed over 30,000 Elis Connect smart traps in the past four years, says he saw that Pest Control was just not thinking that way. "We needed something different, and remote monitoring was that big thing." Going big on Elis Connect,[ii] his company's smart solution, has helped Elis Ireland hold the largest share of Ireland's market.

Unfortunately, those early ActiveSense customers came to regret their choice when the system was sold and Corteva announced it would stop supporting the technology. That's where the risk of going with proprietary hardware became clear. Yet their experience with the troublesome ActiveSense system still sold them on the remote monitoring concept. "I went to PestWorld this year with one goal: Find a solution to replace ActiveSense," Boyar said. "I'm very happy EverSmart was at the event. I've played with a few others on the market and I can say their dashboards and apps are probably 10 years behind you."

Moore at FSS, who is also now testing EverSmart™ Rodent, had never been fully sold on ActiveSense. He and FSS had done co-development work with Bayer's RMS system, working directly with Broaddus and his team. He liked RMS[iii] but for political reasons (Corteva was an FSS client), he had to go with ActiveSense. Nonetheless, he was 100% sold on remote monitoring. "I had thought to myself that the technology would pay for itself after the second year," Moore said. "But often-times, with the add on services it helped us identify, the impact was immediate. I was getting margins in IPM that are unheard of. And I still am."

Integrating Remote Monitoring into a Pest Control Business Model

For decades, Pest Control companies have approach rodent control with a fairly similar methodology aimed at exterminating rodents with snap traps, glue boards and chemical rodenticide. Depending on the profile of the customer, from large commercial factories, warehouses, supermarkets to multifamily or single-family residential, PCOs might dispatch technicians on a monthly or bi-weekly basis to inspect the site and perform other services, from spraying for insects, bird control strategies or changing batteries in fly traps. The largest, most complicated customers might have a PMP permanently stationed on site. But, by and large, the routine was, well, routine. Bait stations and traps checked manually, customers visited on a set schedule, rodent activity often detected weeks after it happened by physical inspection. Worse, sometimes the "alert" came in the form of an angry customer experiencing an outbreak that the PCO could not possibly have know about.

> 'The implications to our business model were huge. But in the early days, I don't think we fully understood the advantages that it was going to have as a business.'
>
> *Kevin Thorn, President, Thorn Pest Solutions*

On paper, disrupting this model with technology sounds like a no brainer. On the ground, however, it takes thoughtful planning, experimentation, a willingness to revise longstanding practices and rethink such fundamental structures as pricing, marketing, routing, staff training and customer engagement. This has kept many PCOs in dabbling mode, trapped in what Moore calls "a march to obsolescence." But, as our five pioneers attest, the hard work required to take the remote monitoring leap will pay off in terms of effectiveness, cost savings and sales growth are worth the effort. "It's the future," says Broaddus, "and you can get ahead of it, prepare for it, or wait until it rolls over you."

There's no simple cheat sheet to integrating remote monitoring into an existing business model, but there are some common lessons learned. It starts with a hard look at your service model.

- Creating small, specialized teams (Tiger Teams) or roles to manage the technology and data and serve as mentors to the rest of the staff;

- Modifying service frequencies based on actual rodent activity rather than fixed schedules;

- Implementing new training programs for staff once initial deployments are up and running to help them embrace the technology and use it to become better PMPs;

- Developing new quality control, oversight and data-sharing processes to maximize the impact on customers as well as your bottom line.

Moving away from routine trap checking to focus on investigation, prevention, and problem-solving is perhaps the most important step. John Moore advocates what he calls a "dynamic IPM service model" that emphasizes finding and addressing root causes. Remote monitoring, he says, helps point techs in the right direction.

"Get the techs off the wall. Mice don't live on that white line where the traps are set," he says. "They live where the resources are, where they find harbor. And that's where you need to be digging."

Using data to streamline dispatches and site visits is another must. Some firms have a set number of visits written into their contracts, so this change can take time to implement. But, as Marc O Connor found, over time the remote intelligence gave Elis an ability to redesign its approach in the field. "We have reduced our call outs, the non-contracted calls, by half over 12 months. The reduction in activity, which is directly related to providing a better service, is saving us money on fuel, wear and tear on vehicles, and we've reduced our rodenticide consumption by 80 percent.

Thorn says it is important to treat remote monitoring as a complete service transformation rather than just a new tool. He also emphasized that simply adding sensors without changing the underlying service model was unlikely to succeed.

"We tried many systems, including the Bell Bluetooth® solution, which we still use. It's fine for what it is, but it's' not remote," Thorn says. "Our sense was that the real game changer was early detection, and putting an end to the hand checking, which wastes so much time. Now we spend the majority of our time fixing problems and working on the places where we know [the customer] has issues, not spending our time where they aren't. So, now we are all in on remote monitoring."

Both Thorn and O'Connor note that those extra services – the work they now do "fixing problems" – has created significant new revenue – a boost of 10 percent annually in the case of Elis.

Finding the right customers and pricing the offering

One topic of profound agreement among these five pros was customer profiles: By and large, the five PCPs who shared their success stories focused on large commercial clients, and particularly those with facing regulatory demands or for whom the reputational risk of a rodent outbreak was viewed as a major threat to their brand and customer loyalty. O Conner is a slight outlier in that he spread remote monitoring across his entire portfolio, residential included. But all agree that the following industries were seen as those where buyers – often Quality Assurance, Risk or Brand Management professionals – saw the value of remote monitoring's more robust and accurate ability to detect activity as well as access to the data produced by sensors and dashboards.

- Food manufacturing and processing facilities
- Pharmaceutical and healthcare operations
- Large-scale commercial facilities and technology companies
- High-risk or "sensitive" environments requiring zero tolerance for pests
- Facilities subject to regulatory oversight or third-party audits
- Customers with previous pest control challenges or "pain points"

> 'Customer acceptance was a big challenge. Some just want the lowest cost. Some of them went elsewhere, and that was fine with me. But what we did was we positioned ourselves as the smartest Pest Control company in the market, basically saying 'This is what we do.' All our new sales had to have an element of smart pest control. Even small contracts with 10 bait boxes, we made sure five of them were smart. And after five to seven months, we usually found customers were upgrading the rest.'
>
> *Marc O Conner, Head of Pest Control, Ireland, Elis Pest Control*

Food production and distribution, says Moore of FSS, is a sweet spot. "In these days of social media and things like that, a rodent can have an effect on your shareholders in hours. Not weeks or months, but hours. I've made that pitch many times and I have never been told no.'

Scott Broaddus said Bayer had its greatest successes with very large clients, including an early engagement with Microsoft, where they deployed their RMS system at the sprawling corporate campus in Redmond, Washington. "That place was huge. Areas like that just had super little tolerance for rodents but maybe had a little bit of a technology-minded approach to things that make the sale a bit easier."

There was also some agreement on customers who, for one reason or another, were harder to sell. Retail, for instance, and Hospitality were seen as more likely to choose the lowest bidder despite the fact that a negative rodent story in the media could do serious harm to their business. "You'd be surprised what a fine restaurant is willing to spend on a kitchen implement and then turn around pinch pennies on Pest Control," says O Connor.

Residential, too, poses challenges.

"When I first started the business, about 90 percent of the portfolio was multifamily housing, housing projects, large property management companies, that kind of stuff," says Boyar. That kind of work is really difficult on the guys that work in the field. It's monotonous and not suited well for remote monitoring. So, we started cancelling problematic customers and backfilling with entertainment facilities, pharmaceuticals, retail, grocery stores."

So how do you sell remote monitoring to end customers in a way that covers the price of hardware? Most agreed that its best to avoid presenting remote monitoring as a separate line item or optional add-on. Instead, they integrated it into a premium service offering with pricing that covered both the technology and enhanced service delivery.

Common pricing approaches included:

- Amortizing hardware costs over longer contracts;
- Building sensor costs into overall service pricing;
- Focusing on value creation rather than cost savings.

"We changed from a traditional type sales call, focusing on a widget, features, benefits, to a more a more consultative sale," said Broaddus. We also found that our buyer was not your traditional technical director. It's actually a cross functional team of marketing, sales and technical people who understood the value."

Marc O Connor also became more consultative in his approach. He would ask, "'What will you do if a customer records a mouse in your store and puts it on social media?' And then they say to themselves, 'Oh, crap, I could be shut down.' It's an approach that works."

For all five, the sales pitch typically emphasized:

- Brand protection and risk reduction;
- 24/7 monitoring and early detection;
- Data-driven insights and transparency;
- Enhanced rodent prevention rather than just control and extermination;
- Regulatory compliance and audit preparation.

In Ireland, O Connor took an all or nothing approach. "I decided I wanted to deliver smart Pest Control as a standard, not just a blue-chip premium product," he says. "I knew that, just like Netflix or their home security system, people would want the best possible Pest Control if we offered it. And we don't offer any other kind now."

In the past several years, Elis Pest Control in Ireland has become one of the firm's best performing divisions, taking market share from its two giant competitors, Rentokil and Anticimex. "It took 12 to 18 months to really get rolling, but recently we've been growing the business by 20 percent a year." He also said that his logistical costs, which make up the bulk of expenses, have fallen steadily, including fuel, rodenticide, vehicle servicing. "My logistics bill went from about 46 percent of my turnover to below 37 percent."

Staff training and change management

All five PMPs say that when they began integrating remote monitoring into their operations, their overriding concern what that it would be rejected by the staff. "If the staff doesn't come along, you can't do it," O Connor says. And while there was some resistance initially, each of these pioneers say that eventually, they found themselves with a more engaged, happier workforce.

> 'We did quite a bit of market research on the employee experience and this is really tough to put a monetary value on. But everyone knows checking traps is not the most enjoyable aspect of the job. What if you could increase your employee satisfaction? You train these guys so much and you invest so much into your people. Is checking empty traps really the best source of their time? That's the employee experience piece of this.'
>
> *Scott Broaddus, VP Expansion, Hawx Services, Apex, NC*

"The old guard was technology averse, but because he's the technical director of the company, you know, I had to push him a little bit. And now he's the biggest fan of the technology," says Boyar.

In most cases, staff integrate took the form of Tiger Teams: Training up a small group of forward-thinking technicians to run the initial customer sites, then allowing their success to trickle down the rest of the company.

"I started with a small group of the younger guys," Boyar continues. "They grew up with an iPhone in their hand, right? We've got this kid that went to college, got a business degree. He's very smart. He just decided he wanted to work at a Pest Control company and he's a great technician who is looking to grow his mind. And, so, this might be the perfect product for him."

O Connor found he was able to split his regions into teams of six, with four technicians proceeding on set routines much as they always had, while two others specialized in outcalls driven by EverSmart™ data, as well as rodenticide. Limiting the number of rodenticide licenses the company had to maintain also turned out to be a significant savings. "And, as I've said, they are more efficient, better technicians. And we're winning more customers, bigger customers, expanding margin, all with basically the same workforce."

Kevin Thorn admitted he doesn't like doing things halfway. "Look, I'm not a patient person," he says. "For us, this was pushing for the industry to adopt things and to be better, pushing ourselves to be better. And I think there's a sense of pride when we ask the staff to do that. And on top of that, they had more time to do the things they wanted to do. Yes, we had to do some training. But I never saw a big hurdle in in getting professionals to adopt this."

At FSS, John Moore trained a small group of his best people and a large food customer. And from there we just grew it." He said any staff resistance crumbled when they saw how his Tiger Team's revenue increased and their bonuses shot up. "And then they said, "I guess it is not a bad idea.'"

"Ultimately I ended up with much happier technicians," he says. "Do you know why? Because they show up at a big site and they don't have to do 200 squats that day. It freed them up to do what they do best and show the customer how good they really are."

Thorn agrees. "Investigation the problem solving that actually feeling like they're solving issues," he says. "Nobody wants to go check empty bait station or empty multi-catches for hours on end."

CONCLUSION

- At the highest level, how can we encapsulate the wisdom and insights that these PMPs accrued over years of investment, trial and error, frustrations and ultimately successes?

- The bullet point version looks simple – something like this:

- Deploy remote monitoring and stop checking bait stations that have no activity and train your people to think diagnostically, looking for preventative upsell opportunities;

- Structure your operations and your pricing for a 24/7 model, not a monthly or bi-weekly visit, and focus on cost savings from fuel, maintenance and materials that result;

- Target customers who have a stake in getting it right: Food production, pharma, high-end retail, hotels and restaurants, health care and laboratories who cannot afford contamination of any kind;

- Share the data with your customers to spur their interest and show proof that the new approach is more effective and worth the price;

- Experiment with sensor deployments outside of bait stations in hard-to-reach areas where rodents transit, harbor and find resources.

And yet, as these pages record, there's a whole lot more to it than five bullet points. Again, none claims it was easy. But it also wasn't hard enough to prevent success.

"I know some people in the industry are gun shy, and there were issues with the early versions of remote monitoring," says Thorn. "You look at the labor market right now and you've got a demographic issue. The workforce is just getting older and you know bending down, doing that every day is harder for older workers. These things are not going away so we need to adapt and adopt this technology and do it quickly."

John Moore, who has the demeanor of a professor who saw this coming long before anyone else, hopes Thorn is right.

"We seem to be locked into the old ways," says Moore of FSS. "But what if we didn't have to do that anymore and we could focus our efforts on real pest control, real problem-solving, real risk mitigation and ultimately save the customer hundreds of thousands of dollars? That was the dream. And, for us, it has become a reality."

APPENDIX I

Biographies

Jonathan Boyar, Principal & Founder, Ecologic Entomology, Boston, Mass. (LinkedIn)

An ACE certified entomologist, Jonathan is the founder at Ecologic Entomology and has more than 40 years of field service experience. He leads a team providing nationwide consulting services and smart pest management solutions for properties in Massachusetts. The firm serves a diverse range of clients, from commercial and residential to healthcare and public entities. Jonathan also offer expert testimony, third-party auditing, seminars, IPM plan development, and product test-trials. Integrity, innovation, professionalism, and collaboration are the four pillars of our core values.

Scott Broaddus, VP Expansion, Hawx Services, Apex, NC (LinkedIn) –

Scott is a veteran PMP with over 15 years of commercial operations and business development experience. Current focus is on new service and business models supported by innovative products and services. He earned his MBA through NC State Business School with an emphasis on Innovation Management, which supports today's need for strategic innovative mindsets, design thinking processes and rapid innovation. He has additional experience in business model development, customer experiences and go to market development. Scott says he thrives in complex environments and working with cross functional teams.

John Moore, Technical Director, FSS, Westfield, Indiana (Website)

John, a frequent speaking and author of many articles on the power of remote monitoring, leads the charge for technology solutions at Indiana-based FSS (Fumigation Services & Supply), a major commercial player in Ohio, Indiana, Illinois, Michigan and Missouri. An advocate of Dynamic IPM, John has scaled various remote monitoring systems across large commercial clients in the Midwestern US, quadrupling his revenues in five years and adding major names in the Food Distribution and Food Manufacturing industries, including Pepsi and Quaker Oats.

Marc O Connor, Head of Pest Control, Ireland & Northern Ireland, Elis Pest Control (LinkedIn)

Marc O Connor - Head of Pest Control ...Marc is Head of Pest Control for Ireland and Northern Ireland at Elis Pest Control, a division of the giant French services Elis SA, one of the world's largest Facilities Management companies. Marc is a pioneer in smart rodent control who with Microshare co-developed and scaled the company's offering, Elis Connect. After deploying 20,000 across Ireland, Marc decided to "go all in" with the Microshare remote monitoring solution to great effect. Remote monitoring is now being assessed for deployment by other Elis divisions across larger markets in Europe.

Kevin Thorn, President, Thorn Pest Solutions, Alpine, UT (LinkedIn)

Kevin Thorn, ACE - President - Thorn ...An ACE certified entomologist, Kevin is President of Thorn Pest Solutions, a science-based pest management company based in Pleasant Grove, Utah. Thorn protects public health, businesses, and food from harmful pests. He is also the published author of "Here to Help: Pest Management Solutions for Commercial Properties.: The book was written to give commercial managers and owners the knowledge and resources they need to:

• Confidently choose the best pest control provider
• Prevent a pest control crisis
• Achieve peace of mind knowing they are responsible business managers or owners
• Protect their business by avoiding complaints, negative exposure, and embarrassment

ENDNOTES

[i] In 2023, customers of ActiveSense were informed that Corteva had sold the product to an undisclosed buyer and would immediately cease customer and technological support. This left many, including Moore, Boyar and others, with no option but to find a new remote monitoring solution. The buyer, widely rumored to be EcoLab, is expected to reintroduce the technology as part of its overall services sometime in 2025. https://www.pctonline.com/news/corteva-sells-activesense-erm-system/

[ii] Elis Connect is an integrated remote monitoring system utilizing EverSmart™ Rodent's technology and backhaul to deliver 24/7 digital rodent control to its customers in the Irish Republic and Northern Ireland. https://www.youtube.com/watch?v=AYlEvbZlGLo

[iii] RMS, originally introduced to the market by Bayer in 2018, was eventually sold to Envu. which after two years sold it on to Woodstream in January 2024. Envu expressed continued support for remote monitoring but said that it was not a technology company and thus the sale "enables us to focus on other areas of our business.' The RMS product has not reappeared since and Woodstream declined to comment on its future for this paper.

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