One Scientist's Buying Process – Interview with Bob Kobelski

This transcript was lightly edited for clarity.

CHRIS	My guest today is Bob Kobelski. Bob is a chemist who has made a career working for Johnson & Johnson, Hewlett Packard, and most recently the Centers for Disease Control and Prevention. He is currently the owner and principal scientist at Resolution Sciences, a training and consulting company in Alpharetta, Georgia specializing in chromatography and mass spectrometry. Bob, welcome to the podcast.
BOB	Thanks for having me, Chris.
CHRIS	We'll start out just to give a little context, could you talk a little bit about your career and the kinds of things you specialized in, so that people know what kind of scientist I'm talking to today.
BOB	I'd be happy to. I have a Master's Degree in Organic Chemistry and a PhD in Analytical Chemistry. I came to analytical chemistry and instrumentation from the qualitative analysis side of the business, which is a little unusual. And while I enjoy solving qualitative problems, most of my career has been spent doing quantitative work. As you noted, I worked for some large companies. I also worked for some small labs, less than 50 people. And over the time, I've worked on projects with an analysis of materials of 99.5% purity, all the way down to trace analysis in the parts per billion range, in nasty biological matrices. Most recently before retiring, I was responsible for coordinating the activities of the chemical component of the Laboratory

Response Network, which is an organization of 54 public health clinical chemistry labs across the country, with the ability and the responsibility to respond to terrorist attacks or other mass casualty chemical exposure incidents.

As you noted, I retired at the end of October and after some time off, I've been working at launching Resolution Sciences. Companies dedicated to technical training and chromatography and mass spectrometry, and consulting at both generic application of those technologies, and specifically in the area of clinical analysis. While I was working for HP's analytical products group, it gave me a wonderful opportunity to develop relationships with scientists and engineers in R&D, where I learned to appreciate the complexity and the level of detail required in instrument development, and actually have developed a bit of a passion for instrumentation hardware.

And recently, the laboratory Response Network provided me with an opportunity to test things on a larger scale. When we started the program after 9/11, some of the labs already had instrumentation in place. And we found that methods that worked well in our hands, on our instruments, did not necessarily work as well on their instruments. And when it came around to making purchasing decisions for 50 instruments or 60 instruments at a cost of $400,000 each, you'd better make a good decision, otherwise people get a bit agitated [chuckles].

CHRIS I'll bet. So this conversation that we're having, came about as a result of a post I made in the Analytical Instrument Professionals group on LinkedIn. And you and some other people chimed in on that post and we had a nice debate, and I thought it might be helpful actually to finish that off and have a conversation about it, because it seemed like there is a lot for marketing communications professionals to be learned from people like yourself and the other people in this conversation. I will link to that post in the show notes.

There is one comment from Scott Abbott, and he kind of gave the idea that first just talking about choosing the right instrument for some processes would be valuable. I think a lot of marketing communications people, have a narrow view of how they're going to market their instruments and how they're going to talk about them. And we never really even talk about how do you choose the right instrument for the job. So can you talk a little bit about that process?

BOB

Sure. I think this is really the first question to ask before considering the acquisition of an instrument. There are often many ways to solve a problem. There has to be an analysis of many variables before a decision is made. The first question for me is - what analysis techniques provide the required sensitivity accuracy and precision? Then something that I don't think is often considered, is an evaluation of your current resources. If you're going to add new technology, it's really exciting to buy a new instrument and a new technology. But the lag time before it becomes productive, is greater than employing a technology that you're already familiar with and have experience with. You might choose a somewhat less effective technology, if it gets you the answer in a more timely manner. Cost is always a factor, those parts are relatively easy to asses.

The more difficult part involves looking into the future. At one of the small companies I worked for, I looked at the application area and the analytes, and worked to introduce LC-MS/MS to replace GC-MS. Because the new technology reduced the amount of sample preparation, labor intensive sample preparation, and provided more analysis per hour. That time my crystal ball gave the right answer. And after the lag time to establish the technology, LC-MS/MS flourished and the GC-MS systems all but disappeared.

CHRIS

Great, so picking the right instrument is something that needs to be done. Tell me a little bit about that buying process? What are the steps you take, once you've decided on the right type of instrument? From there, screening vendors and evaluating products and so on.

BOB

Just be aware that this is very different from organization to organization. I'll try and lay out a generic approach, and then perhaps get a little bit more specific. Generically, the first thing is that a need is perceived. And hopefully, this need is perceived as a joint venture between a customer and the analytical staff. If someone comes in with a problem and asks the analytical staff how this problem can be addressed, then the analytical staff will sit down and look at the potential ways of addressing the need on paper, going through different potential technologies.

After getting a decent list, then we get to that step where you consider what the existing tools and talents are, whether you can do it with current instrumentation or whether you have to step outside the box and buy something new. If you decide

you have to buy something new, then you have to get some sort of information about the cost. And because of the government mindset, I think in terms of budgetary estimates rather than quotes from all the potential vendors. And then figure that the actual cost is probably going to be higher than those budgetary estimates, and multiply the numbers that you've got by - I don't know - 1.2, 1.5. Just so that when you move forward, you don't wind up in a situation where you're ten bucks short of being able to accomplish what you need to accomplish, and then having to beg for that money.

If it's a new instrument, then you have to check into the requirements for site preparation. And this could involve getting engineering or facility staff involved, which adds to the timeline in moving forward. But again, there's nothing worse than having an instrument sitting in the middle of your laboratory with no way to hook it up.

BOB

And the next step that's kind of generic, is to convince leadership that the perceived need is real, the perceived need justifies the expense, and that you have the solution to meet that perceived need. If you're successful there, then things start to get serious. Specifications are compared. At this stage, using industry's standard measurements like Octafluoronaphthalene for mass spectrometer sensitivity is absolutely fine. You just want to have a comparison using the same benchmark for multiple companies. Science and technology need to be compared.

Again, from the network perspective, if you're going to spend $20 million on old technology that's obsoleted the next year, you've made a bad decision.

Typically, reduce the number of potential vendors to about three, for a real world evaluation. The first step for real world evaluation would be to provide the vendors with real world samples that are prepared, and generic methods for the analysis of those samples when they exist. The sample should contain calibration materials, quality control materials with stated concentrations, and unknown samples with unknown concentrations. All samples would be in the relevant clinical nature or the relevant matrix, because this is a real world test.

You want to be sure that the instruments that you're evaluating, can operate with real samples. This is really a critical stage. If the vendor doesn't take this test seriously - and it surprised me that many have not - then they're eliminated. Because if they’re not willing to make an effort to

make a sale, how much effort are they going to make afterwards?

Then the vendors pass the information back, and you sit down and evaluate the results. And if as long as no one falls out, then it's time to schedule site visits for real world testing. And this testing includes the evaluation of the software, as well as the day to day performance of the instrument - again, using real world samples.

The difference between this and the previous test, is that if the instrument vendor took things seriously, they might spend a week or two setting up and optimizing their instrument to get the best possible data for your sample. But nobody has a week or two to spend optimizing their instruments. It's a matter of if we come in and put the samples in the auto-sampler - how long does it take to get up, to get tuned, to get calibrated, and to produce good data.

CHRIS

So can we go back? I just want to go back to a couple of things you said. And one is to point out that there are many, many people involved in this process. So after you've chosen an instrument or what type of solution you're looking for, then the engineering possibilities. So what's it going to take to hook this thing up? And so on. So that's another stakeholder.

And then there's the leadership who have to sign off on, whether this is something you're going to go forward with or not. And there are the budgetary considerations where if in a government lab it sounds like if you come up $10 short, it might not happen, right?

BOB

Absolutely. That's usually in the smaller organizations. And this would be the next step in the process, would be actually trying to get together the purchase. And that will vary dramatically from small organization to large organization to government organization, because of the extent that the scientists will be involved in the process.

CHRIS

Well, I was just going to ask about - thank you for that detailed explanation of the buying process including a couple of demonstrations, and tie it back to something I'm trying to get people to think about - all the questions that will come up in that entire process and the importance of marketing communications, to get out ahead of those.

And everything that you can answer ahead of time, not just with respect to specifications or instrument performance, but how will we do this for you? For example, what will you need to send us for us to give you a good demo? And vice-versa,

what will you require from us? But answering every question about the selling process that you can ahead of time will ease the path for a customer, right?

BOB For sure. For sure.

CHRIS Moving on to a little more marketing communications thing, based on the LinkedIn exchange we had. Where do you see that marketing communications organizations fall short, when they're trying to persuade people about their instrumentation or let people know about them?

BOB Keep in my mind, as I said, I'm really a hardware aficionado. So from my perspective, I find most marketing communication to be very pretty, but it's fluff. There are nice photos, they have attractive people with instruments and a nice clean laboratory, there's a graphic or two.

But being an analytical scientist, I want to see relevant data. And as a lab leader, I would also like to see an estimate of the cost - both purchase price and cost of ownership. For me, relevant data includes all the typical parameters for that type of instrumentation. As I said, like sensitivity using industry standards. But I don't want to see just numbers, but I'd like to see actual instrument output. So that I can determine if we're evaluating the data the same way.

There have got to be five or six different ways of evaluating signal to noise ratio. And while you figure that any instrument vendor is going to use the one that gives the best results for their instrument, that doesn't help you necessarily to compare between two different companies.

So one example of relevant data for me, was in a J&W scientific catalog, many, many years ago. After the introduction of a more stable version of Carbowax stationery phase. And it showed a chromatogram with a new column, superimposed on one after one hundred injections, and superimposed on one after one thousand injections. That gave me a belief that the technology - which of course was proprietary - actually worked.

And with my hardware exposure, I would rather see instrument schematics, than a photo of people standing around the instrument. And if there's a novel technology that makes this instrument better than that instrument, I would like to see an explanation of that technology and help me understand the advantage. If I can understand the advantage, that will win me over if the explanation is accurate.

The worst thing that Marcom can do - and I say Marcom, I certainly include sales in this as well - is to make technical mistakes or make irrelevant claims. When that happens, it loses me not only for that purchase, but potentially for future purposes as well because the credibility has been challenged.

CHRIS Can you give an example of an irrelevant claim?

BOB I was at a technical meeting and a vendor of mass spectrometers was delivering a presentation, and they were talking about an MS/MS transition - and I'm going to make up the numbers because I really don't recall. It was like from 96.4 to 68.5, and there's nothing in the world that weighs 96.4 and there's nothing in the world that weighs 68.5. I raised the question of how could you get that data, and the response was, "Well, unlike other vendors, we use hyperbolic quadrupole rods." And yes they do, but there are multiple other vendors who use hyperbolic quadrupole rods. So bringing that up was irrelevant to the discussion, and it really made me wonder if there wasn't some software problem that did not make it simple to do a good mass access calibration, which would always cause me concern about the quality of the data. And the gentleman from the FBI who was sitting in the audience, chimed in and said, yes, he would be laughed out of court if he presented data with those numbers in it.

CHRIS Interesting. So let's go back a little bit to something you said about-- I mean I really appreciate your point about seeing more data and less fluff, and I've had that feedback previously from scientists in one of my previous job where they said, "Why can't we just have these chromatograms?" There's so much information to be gotten from those, without all the stuff around them. Just the raw data is helpful. But you mentioned, schematics and other things. I got the sense of looking for more transparency. Of course from the corporate side, people are worried about giving away too much information or having competitors take that information, and use it against them in a paper-specifications battle. I'm guessing what I want to know from you is, how do you look at that and would you value that kind of transparency over the risk to the company that they are giving something away. I don't mean giving away something proprietary, but setting themselves up for a battle they can't win.

BOB Well, I think any significant increase in technology is going to be patentable. There's absolutely no way that I can imagine that you can-- an instrument company can keep proprietary

any major change in technology, because there are enough really good people in R&D in every instrument company, to be able to reverse-engineer that. Clearly with things like producing columns, some of that proprietary technology either becomes very hard to get handle on or disappears during the manufacture. So I don't see that there's really much of a risk of giving anything away, as far paper specifications. That certainly is a possibility, but paper specifications are not what sells instruments. It's performance on real world samples, at least for me.

CHRIS Sure, I understand. The feedback I have gotten from, perhaps, sales people or whatever, is that if we publish the specifications and they don't match, because if you put two instruments together, there will be places where either of them win against the other, and if you don't know which one the potential buyer cares about, they can eliminate you right off the bat based on a paper specification. When, had they gone further in the process, you might have been able to win that deal.

BOB Yeah. And from the salesman's perspective, I can understand that. And I think that goes back to my basic premise, which is you - have to test an instrument with your samples and your application, because industry standard benchmarks are just a starting point.

CHRIS I guess maybe we've already covered it, but what information in marketing content is most helpful for you to make a decision?

BOB First and foremost-- well, since we were just talking about performance benchmarks, that's a starting point. So it's good to have the performance versus the benchmarks. And as I said - and as you recognize - that showing the chromatogram as opposed to just the signal to noise ratio, is a step in the right direction. Science associated with new technologies help me to understand. I am not a physicist, I'm not an engineer, but I am reasonably intelligent. I have a reasonable technical background. If you can explain the science to me and how it will make my life better, then you have an advocate. If you present the technology and you can't explain it, or if you exaggerate it and it doesn't make sense to me, then you've got an enemy.

CHRIS Of course.

BOB

I'd love to see data about repair history and uptime. If the instrument isn't robust, it doesn't matter how well it performs when it's running. It's running that is important. Particularly, if you put that in the context of the emergency response network.

And how many instruments are in the field? I don't want to buy serial number 0001. And when I was at Johnson & Johnson, we were actually offered the opportunity to buy the first commercially available instrument from one vendor. So I don't want to buy 0001 and in the network perspective, I certainly didn't want to buy serial number 0001 through 0050.

But at the same time, I don't want to buy an instrument that will reach its end of service life in seven years. I want to be able to depreciate that half million dollar purchase over as many years as possible.

And then I think the last thing of the data systems, everybody makes the same claim about intuitive interfaces, and some of them are intuitive to some people and others are intuitive to others. That's got to be a matter of sitting down and seeing whether or not it works with your brain. But the thing that I want to know are the computer requirements, and all too (many) times the configurations that are being cited are minimal configurations. I want to know the real world.

In today's world, the difference between a minimum configuration and a data system that will do everything you want, is only a thousand bucks. And on a $500,000 purchase, that becomes trivial. I want to know about the ability to connect to a network. In some environments, you can. In some environments you can't, just from a security perspective. I need to know about software updates and upgrades. I know that a lot of this is projecting into the future, the unknown. But roughly what the frequency is, what the costs are, and then again, whether or not the instrument needs to be connected to the internet to perform those upgrades or updates.

CHRIS

Interesting. You have somewhat jumped ahead to my next question, which is great. But the next one would be to talk about aspects of a purchase outside the instrument. So you have covered, not necessarily service and support, but certainly robustness and uptime and software. But what other aspects of a purchase are important for you? And can you give them some relative weight around consumable, training, and so on?

BOB

Yeah, relative weight will be a bit of a challenge, and I think it's very different depending upon your stage of development or your laboratory stage of development. Repair service is critical. As I said, it defines your up-time and we recognize that all instruments are going to break. And sometimes it's a function of the design of the instrument, and sometimes it's the function of the design of the operator. But what's important to me is rapid response and a fix at the first time solution.

Again, with the emergency response network, emergency service was of supreme importance. And all of our vendors, when we were running emergency response exercises, they were willing to provide us with 24/7 support - which was a great benefit. For that reason, we steered away from third party support, because we found that access to parts was not the same as the actual vendor, and that they would make a best effort. And if they couldn't fix it, then you'd have to wait for the vendor to get involved and that was not timely.

For me, I find the key to good service, is dependent largely upon the quality of the individual service engineers. So if you know who will be the person with primary responsibility for your account and you know that person is good - that's a great advertisement. If they're not that good, that can actually steer you into a comparable instrument with better service.

CHRIS

That's helpful. All right, I really like that one.

BOB

Moving on to things like technical support, I think it's important when you're new to the technology or new to an instrument platform. For me being a bit of a dinosaur, especially when it's software related. Let's face it, factory produced manuals are of little use and that's almost by a necessity. When you look at the complexity of instruments and software, the manuals would be a 1,000 pages long, and then with the updating of the software, they have to update the manuals twice a year. How can you keep up with that?

For me, it's much easier to have the vendor's technical experts digest the changes, and then regurgitate the changes to me with respect to my application when I hit a road bump. If that requires having a service contract, that's absolutely fine with me. If it's an add-on to the service contract, that's absolutely fine with me because it allows me to get the answer quicker.

Consumables? I think that's very dependent upon the instrument. So for things like instrument-specific consumables like inlet liners. If you are not a major player,

then having the consumables available that are certified for use in the instrument, I think is a significant benefit. If you're looking at a GC for example, there's got to be a dozen after-market vendors selling instrument-specific consumables. In that situation, I don't see it as being particularly critical.

Perhaps the last thing is training. Since I've been involved in training for over 25 years now, this is something that's very near and dear to me. In my experience, instructor-led training at the vendor site is the most effective. It puts me into someone else's instrument, which means I'm not taking something away from my laboratory's performance. It gets me away from the nagging demands of the job, or at least it moves those demands to different hours and after the class. Ideally the instructor is an expert, not only with the hardware and the software, but with the technique. And that gives me someone to discuss the application of that instrument and that software, with respect to my laboratory's needs.

BOB

Now, I say instructor-led training is the way to go. But the problem, just as with the factory manuals, is there's such a level of complexity that the orientation is packing too much information into too little time. And from my experience, this is counterproductive. And ultimately, the student has to be able to go home and do their specific job to justify the expense. It's hard for them to grab the information that they need when they're overloaded with information, which might not be particularly relevant to what they're doing. This could translate into needing more than a single course to become an expert in instrument operation, and that's usually cost-prohibitive and I recognize that. But personally, I just think that the hardware and software is too complicated for sound-bite training. Running a mass spectrometer properly, is very different from operating a copying machine.

CHRIS

Yeah [chuckles]. I get it. No opportunity to put some of that training in a digital form, and then follow up with in-person training? I'm just asking for an alternative possible solutions.

BOB

One of the things that-- when we started the LRN, we had training for 46 laboratories, I think. We started out doing hands-on instructor-led training, and it was incredibly effective at bringing up people up to speed quickly and producing high quality results. And we knew that they were producing high quality results, because we were also running a proficiency testing program. So there was no way to hide if you weren't producing. Then reality started to move in, and

travel budgets got harder and harder to deal with. And we started to do computer based training and basically sending out a CD with training materials on it, which included lecturers et cetera, et cetera, et cetera. This is pretty effective, as long as people already knew the technology. So if it was simply a matter of putting in different instrument set points, then the computer-based training worked like a charm. But people objected to it, because they-- it lacked the human contact and the ability to ask questions. So what we were using toward the end of my tenure, was to do a web-based training - where in the morning, the instructor would provide lecture materials and in the afternoon the students would have laboratory experiments to do. And they would be in their laboratory, they would run their instrument, they would produce their results, and the results would be starting point of the next day's lectures.

We found that very effective in terms of the technology transfer and in terms of giving the student the opportunity to ask questions, and to go beyond the material that one instructor might put in to a simple self-paced training.

CHRIS

Nice, I think that will be helpful to a lot of people too, as an idea of how to get around. Because I understand travel budgets and all that, is a challenge I'm sure for every industry. And so you mentioned the human side. So one of the last questions here is, sometimes there is a person in the factory that has good information for you. And I don't know if I have a perfect question here, except how can companies take advantage of those subject matter experts?

And actually, this was sort of the impetus for the post that got this whole conversations started in LinkedIn - is that there are subject matter experts who are not in marketing, they might not be product marketing, often engineers R&D, who can do the kind of explaining about the technology that you were asking for. And in my post, I was suggesting there are many ways to get information out of them without asking them to write something, for example. Which, when people want to write something, it puts a large burden on them because they want to make it perfect, but that same person might be very good at just talking in to an iPhone or doing a short video to explain the technology. What are your thoughts about that?

BOB

I love talking to R&D people. Unfortunately, they are usually the people that no one outside the company is allowed to talk to. Because they have an enthusiasm for the product, for the technology that they've developed and it's really evident. Sort

of on the negative side though, is they tell more truth than anyone else. So just letting them talk might not be the best way. Keeping them sort of to a script that's pre-approved, might be better. But they are the people with the best answers.

CHRIS Well, I think that-- yeah, go ahead.

BOB I think the factory applications people can be a good substitute for R&D, if they spent enough time talking to the folks in R&D and they have enough experience with the hardware and software, and they usually have a better ability to relate the technology to the real world, outside the factory.

CHRIS So some combination there, might be an opportunity. What about a recorded interview between an application specialist and an R&D person? Where the application specialist who has been in the field talking to customers and knows the questions. Really, what I'm trying to get at here is a way, maybe, to save time for people in R&D to not be on the phone with customers answering questions, but to get this out in what would be sort of a visual FAQ. At the same time, creates some affinity between a customer and a company because they have this person that they're sharing the technical expertise with.

BOB I think that would be a really good thing to do, within the context of a particular application area. So if there was a technology that was developed to be able to have somebody who has some visibility and incredibility in, for example, clinical analysis. Discuss with the factory expert, how the new technology can be applied to the clinical analysis. And that makes it useful not only to somebody like me who wants to learn about the technology, but to somebody who's less concerned with the science and more concerned with publishing a result. So it gives a broader spectrum of appeal than just somebody talking about an application, or somebody just talking about the science.

CHRIS Sure. Very good. My last question - and it's not science related at all - just tell me a little bit about what you like to do when you're not working. I realize now you're retired, you might be doing other things. But even when you were working, what did you do outside the lab?

BOB Believe it or not, at 66 years of age and living in Atlanta, Georgia, I'm playing ice hockey about 35 times a year in an adult recreational league. While the league might not be NHL

quality - and that's if you could imagine an NHL as a Co-ed non-checking league [chuckles] - the camaraderie before, during, and after the game, is absolutely world class.

CHRIS Nice [chuckles].

BOB Most of the year in Atlanta, I'd like to get out and play golf, over 50 years trying to figure out that game. But it is one sport where the scenery is beautiful and justifies going out, even if you're having a bad day.

CHRIS Exactly. That was the answer I expected. And honestly, I've thought of-- I've tried to get discussions going on some social media with scientists about their hobbies, because you're always surprised. I used to work for a guy who is-- that I knew pretty well. Well, he was my boss for a few years. Then I found out long afterwards that he builds model ships. I had no idea. Scientists and others, have so many interesting hobbies that you just wouldn't recognize. I commend you for the ability even just to stand up on skates, because I still struggle with that.

BOB Yeah. There are some days, I don't do it very well [laughter].

CHRIS Well, I really appreciate you taking the time to give me all these answers and ideas. I'm sure that a lot of what you said here today will be really helpful for my audience, Marcom people across the industry. And again, thank you very much.

BOB It's my pleasure, Chris.