Podcast Transcription

Implementing Lean Marketing Systems



Theory of Constraints in Innovation

Guest was Mike Dalton of Guided Innovation and Author of Simplifying Innovation

Related Podcasts:

Theory of Constraints in Innovation

Customer Value Lens

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Mike Dalton was my guest on the Business901 podcast. Mike is the founder of Guided Innovation Group, whose simple mission is helping companies turn their new product innovation into bottom-line impact. The Guided Innovation System™, their unique TOCbased approach to rapid innovation improvement is helping companies slash time to market in half and nearly double new product profits.



His new book, , Simplifying Innovation: Doubling speed to market and new product profits - with your existing resources, is the first to apply the Theory of Constraints for high leverage innovation improvement. You can learn how to get more impact from your innovation by visiting the Guided Innovation website or visiting Mike's blog for a wide array of reports and other free innovation resources. There is a sample chapter download available at http://www.SimplifyingInnovation.com/chapters.

"A Theory of Constraints approach to the process of innovation was long overdue. Production, project management, supply chain, and policy constraint analysis have all been comprehensively Doubling speed to addressed. But until now, no one has thought to examine the ramifications of constraint theory on the challenge of innovation. Mike Dalton's novel was worth waiting for. Simplifying Innovation synthesizes innovation best practices and the focusing step framework to create a powerful new application of TOC. Let it stimulate your imagination as it did mine." -H. William Dettmer, author of Strategic Navigation

"Inside a fascinating business novel that I literally couldn't put down, Mike Dalton has created a hands-on field manual to extending the Theory of Constraints to innovation - I only wished I had the benefit of Mike's insights during my days as a R&D leader in Bell Labs." -Dr. Matthew W. Sagal, coauthor of The Strongest Link

Theory of Constraints in Innovation

product profit

with your existina

resources

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Joe Dager: Thanks everyone for joining us. This is Joe Dager, the host of the Business901 podcast. Participating in the program today is Mike Dalton, the managing director at Guided Innovation and author of the book Simplifying Innovation. Mike, could you give me an overview of Guided Innovation?

Mike Dalton: Sure, Joe. Well, Guided Innovation, our focus is really helping clients get more impact, more bottom line impact out of their investment in new products and innovation investment, so called research and development. And that's really the focus of Guided Innovation.

Joe: What prompted you to write the book?

Mike: The book Simplifying Innovation really chronicles the methodology that we use with companies to help them do that. It is based on the theory of constraints approach to innovation. Finding the bottle neck or the constraint, which everyone refers to it as, but finding the thing that is limiting your product development from getting more new product input. Having more success and also potentially causing it to take too long, finding that part of your innovation process and really focusing on that as a leverage point to drive all of your improvement.

Joe: I enjoyed your book; it was written in story form and then in the last part of it, it gave a "Guided Method of How To."

Mike: Well, I appreciate that.

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Joe: Everybody understands the constraint from the production standpoint but how can you really use it in innovation?

Mike: Well you know Joe, I get that question a lot because there are two camps in the idea of improving innovation. They are the art camp and the science camp, and I think that an innovation definitely has elements in both but at its heart; there is a process in innovation. Any process that can be improved and I think that's why the theory of constraint methodology works so well as well in innovation as it does in other areas.

You obviously came out of the manufacturing science originally, but the ability to find that leverage point that bottleneck in an innovation process and put all of your efforts in improving that part of the process really gives you a tremendous leverage that other approaches to innovation don't necessarily always deliver and that is not because they are not valuable.

It is just at that time; they are not valuable and, in fact, I think what you'll see in the book is I borrow from many different innovation methodologies.

I think there are a number of tremendous authors and thinkers out there on the subject of innovation. But as innovators, the question that we always have is which one of these methods, which one of these approaches applies to the situation that we are in.

What's the framework for helping us decide that much like today you see TOC, Lean and Six Sigma all being used together with TOC being the focusing mechanism?

The place that said this is where we need to put those Lean Six Sigma tools to work. I think that is exactly the idea with Simplifying Innovation and the TOC based approach

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innovation is how we put all of the different tools, theories and just the great different authors and folks that have put these things out there in innovation.

How do we put them to work and is this the right time for a particular company and situation and that's really what we try to do.

Joe: So Simplifying Innovations isn't dumbing anything down, right.

Mike: Absolutely, in fact, what I meant by Simplifying Innovation in the title of the book, to me innovation is always a complex system and usually pretty complex process. Even though you can break it down to a handful even more than a handful of parts, the inner relationships between them can be very complex system, but improving that system shouldn't be complex, and it's what Goldratt refers to as inherent simplicity. This is an idea in his very latest book called The Choice.

He wrote about that even the most complex systems and sometimes the more complex the system is the more apparent it becomes that you have to find a simple single place that governs the entire system, the bottle neck basically.

And that is why it is called Simplifying Innovation, because that is what we are trying to do; finding within the product development process that is the leverage point or the control point for being able to drive all improvement.

Joe: I always think innovation is forward thinking. How do I know where that constraint is in the future?

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Mike: That's a really good question because that comes back to a critical point when you start to look at whether or not you should even begin focusing on the improvement in innovation in an organization. If the constraint is outside of your organization, referred to as a market constraint, we now have more capacity than the market requires.

Well, that is the place where it begins to make sense to try and look at our internal. Our internal innovation process and focus on how to drive improvement. If, on the other hand, there is more demand in the market than we have the capacity to supply, then I tell most companies, you really shouldn't focus on innovation, in improving innovation and I am talking about innovation from a new product standpoint, new service standpoint.

That is not where you should focus your improvement effort. Clearly, your improvement effort should be focused on how we drive more capacity, more manufacturing capacity from our organization.

So if indeed, the constraint is outside of the company and it is a market constraint, we don't have enough demand then we need to take a look at our innovation process, and that starts all the way, from the very beginning what they call the fuzzy front end of innovation.

Being out in the market place and finding opportunities, moves through assessing the opportunity testing feasibility of the opportunity then developing the solution to the unmet need or problem that you found in the market place, scale up and then all the way to commercially launching and marketing the new product.

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So, it really is an end to end process and that's the process that we have to look for where is the constraint in that process. That is what's going to drive improvement and many times; it makes sense to keep the...

It actually makes sense to keep the constraints in one particular place. Some organizations... I have worked with some organizations that have large pilot plants where they produce ball samples, as well as initial prototypes and even sometimes the first few production batches are produced in a pilot plant, and that can be a very big investment.

So sometimes it makes sense to actually use that as the pace that the pilot plant can work at as the constraint or the leverage point for the rest of the product development process.

In other cases, it may end up being a development group or it may end up being a testing, part of the testing that goes on within the product development process. It is really very dependent on each and every organization as to which one makes the most sense, but that is really what we mean by a constraint and...

Joe: I always think of the drum buffer rope, can there be such a thing in innovation, or something similar to that?

Mike: Well, yeah, I think that... Certainly, that is what you are trying to do. You are trying to connect your organization to the unmet needs in the market place and let those needs, those problems that you find in the market that you think you can profitably serve. You are trying to let those needs pull that project through the organization I think is one way to look at it.

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The other is that if, again, let's go back to the example of the pilot plant. If the pilot plant is the drum in your organization and it can only take so many samples can be produced per day and you know at the beginning that you have a rough idea of how many samples are required to...

In the course of the product development, you really know how many projects you can run at one time given the number of people that you have.

And you don't release work any faster than that drum, in this case, is able to work.

And the idea of what they refer to as pipe lining in the area of critical chain where you try to work on... You try to have as many people as you can work focused on one project moving it through, moving projects through sequentially to give you a faster, faster cash flow from projects rather than trying to move ten projects through the organization at one time in one...

Let's say, to get ten projects through at one time all in one year if we can get all of those projects.

Each project through in six weeks we are going to be much... six weeks and then move on to the next project and the next project we are going to be better off, because it will speed up cash flow because each project gets the market sooner. Most of the projects get the market sooner.

Joe: When we talk about constraints, what's the biggest innovation constraint you normally find?

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Mike: The location of the bottle neck can be almost anywhere in the location that is really independent on the organization itself. But what I find is that the thing that can constraints the bottle neck is almost always focus on the place where I start. I just almost always find organizations trying to do too many things at one time, and this is a lesson that is taught in critical chain.

It is taught in a number of places in the TOC literature, but it is really something that as many times as it has been taught.

I am always amazed to see that is where organizations almost always struggle is trying to do too many things and focusing on efficiency instead on the real goal which should be through play and that's... That focuses is one of the most vital things to really improving new product development.

Joe: When you first said that I laughed. It's like one of the first things you're taught in grade school is organization.

Mike: Absolutely. In fact, I wrote a blog post one time which was the innovation lessons we learn in kindergarten. That was exactly it. It was focus.

Joe: One of the things I really liked in your book was the Customer Value Lens. I don't see people describing it that way, and that is where I think so much innovation is missed. Can you explain the value leans a little bit?

Mike: The Value Lens or what we call Customer Value Lens really starts with the definition of innovation. The definition of innovation that we worked from is an organization wide process. Finding and profitably serving customer and market need. That means the first

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thing you have to do is be out in the marketplace, be out with customers, potential customers or new markets and be looking for the problems, the things that they are trying to do that are difficult for them.

That are difficult, costly or problematic in any way and then the first question we have to ask is once we identify that, and I like to use Clayton Christensen's jobs approach there. I think it's a great.

What job is the customer hiring your product to do or what job are they, if they are not hiring a product to do it today that might be in even better situation, what job are they trying to get done that is inconvenient, costly, messy, whatever it might be, and then once you know that, then the question is and what value does it create for them for you to solve that problem.

And again TOC offers a great set of metrics for understanding that because one of the metrics, a set of metrics within TOC is what is referred to as Delta T IO&E.

And that is what change in throughput does it create? What reduction and inventory or investment does it allow or what reduction and operating expense does it allow?

And if you are looking at any of those three things, does it allow your customer to sell more, does it reduce their working capital or does it reduce their working expenses?

If it doesn't do one of those three things, then it's probably not a very good opportunity, because the chances that they are going to buy it are chances... Particularly that is more of an industrial business to business kind of a model. But the chance that they are going to buy it if it doesn't do one of those three things is really pretty limited.

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Then the next question after you understand what value it creates for the customer, the final question that you really have to ask is how can we participate in that and is there enough value created that we can give the customer tremendous value and at the same time, we can also make a very attractive profit. And what is that? I always suggest that come is trying not to focus on a particular target profitability whether that is 30%, 40%, 50% whatever margin they're use to making.

They should always look at each problem fresh, because sometimes they'll find that the value that their solution creates can provide much more margin than they might normally ask for if they understand at the very beginning, very early on the project if they understand what kind of value it creates for the customer.

Joe: The other way I look at it is can they make money doing it.

Mike: Yeah, that's it if it doesn't create enough value for the customer that there's value for both parties to share in, the customer and the company, then there's absolutely no reason to do it.

Joe: How can you relate that to more of a consumer market? I mean let's say a retail store or like that?

Mike: Well, in a consumer market, if you look at business to consumer, different tool. We use different tools for customer value lens and some of those... One of the biggest tools at this point or not biggest tools but biggest drivers at this particular point in time happens to be convenience. But really, what consumer market here is always looking for what is the new point of competition?

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What is the point of differentiation that you can offer and so to give you an example on convenience; you see a lot of this in markets for cleaning products and a good example is SC Johnson's sale of an automated shower cleaner.

You hang this thing inside your shower, and when you are done showering, you push a button and it beeps for ten seconds while you get out and close the door and it sprays the inside of the shower and what that product is...

The idea behind that product is it essentially eliminates the inconvenient messy job of having, every couple of weeks, to get in and scrub the shower.

So, it competes really on that dimension of convenience when you look at it from a cost perspective; it actually cost more. If you look at it from a cleaning performance perspective, it really doesn't perform quite as well as a good old sponge and elbow grease might. It's really all about that aspect of convenience and saving people time is in today's busy society, it is a huge impact, so that is an example of a product where when they were designing the product that's what they were intending to sell it on from the very beginning; this sole factor of convenience so, there can be other elements of basis for competition.

It doesn't have to be competition, the consumer market understands what that basis of competition and change basis of competition is. That is really the model we use for business to consumer Customer Value Lens.

Joe: I've seen a lot of innovations from my perspective. We used to go there and try to sell people this is going to reduce cost. This is going to save you time as you just mentioned. Now, it seems like the innovated product is going to create business for you,

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because more people seem to have market constraints, so the more innovative product is how we create business. Do you see that or do you have a different take on that?

Mike: That is where the focus should be, because it has essentially unlimited potential if you think about those three metrics I talked about the Delta T IO&E. Delta T is a change in throughput new product sales or change in sales is really unbounded. We can grow our business. There is really no limitation on other than the market or the new markets that you can find but when we compare that to an investment or we compare it to operating expense. You can only take operating expense so low. You can take only investments.

Once you get investments down to near zero. Now there are some business models that have negative working capital but that's...

Dell has slightly negative working capital model, but operating expense is very much you are limited. You're definitely bound by zero, but you are really bound by, probably by your supplier's cost of manufacturer at the very bottom.

So, there is not a lot of leverage once you've cut operating expenses by ten, fifteen, twenty percent. Try to get another ten or fifteen or twenty percent. It gets tougher and tougher each time.

So the idea of focusing on how you can sell more has a lot of advantages. I will say though that it is one of the more difficult things for companies to sell.

If you are going to sell that approach, it requires very clear, very, very clear benefit statements. And you have to really give some good proof statements for people to believe that what you are selling them actually allow them to sell more in the end.

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Joe: Can you explain the guided innovation system to me? Is that really the basis of the book?

Mike: The book since it is a business novel that is really what is developed over the course of the book, so the book is about the company that is struggling with a new product development or a new product innovation. As the general manager for the company who has a background in TOC is thrusting to this need to fix new product development, she slowly discovers how TOC applies to product development as well as the manufacturing which she was always aware of.

And so really it just starts with the five steps that... The same five focusing steps that TOC has and start identifying what your innovation bottleneck is and its constraints.

And what's constraining your innovation bottleneck? So where's the place in your organization that you see there's a constant... the organizations constantly waiting on output from that part of the organization before projects can move forward. That's the starting phase.

And then, really, the bulk of the effort, once you understand that, the bulk of the effort goes into the next couple of steps of, how do you exploit the bottleneck? How do you coordinate the rest of the organization or subordinate the rest of the organization to the pace of that bottleneck? And finally, how do you elevate that bottleneck?

But what we're really talking about is once we know what the bottleneck is, how we operate it in a way that first, uses all of its... uses every bit of the capacity that we have available at the bottleneck?

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And then once we're in a place where we're using all of the available capacity then how do we elevate that capacity? How do we add capacity to the bottleneck?

So, very similar to what you'd be used to in a TOC manufacturing environment, except that we're just looking at different issues. One of the things that it has in common, though, is that oftentimes the things that constrain the bottleneck are not real physical constraints.

That's where everybody always wants to start... that's where they want to look when we start, right? They want to say "Well we don't have enough people; we don't have enough equipment; the lab isn't laid out correctly". This problem that problem, they'll look at the physical issues, but it really, oftentimes, comes down to policies at the start.

Again, one of the biggest policies as I mentioned before has to do with focus. We see organizations that run without an assessment. For some projects, it just gets ignored, and they let projects just... sort of... The front of the funnel doesn't have a sieve on it, and it just allows every new idea that anybody has to go into the product development process. Soon you find that you've got people working on so many things that you get into a situation which I call "glacial innovation", which is that...

Yes, you could work on every project that you have and that you want to have, as long as you're happy with them, moving along at glacial speed versus working on one or two and moving them very quickly. You can move them all an inch a year, or you can finish two or three of them in a year if you really focus and work on getting them done.

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Joe: Innovation is such, I don't want to say an art, but is a process you go through. How, as a consultant do you work with someone in that area? Do you have to walk through an innovation process with them all the way through?

Mike: We start by doing a diagnostic with them. Every company is a little different, just like their innovation process is a little different, just like any manufacturing process is a little bit different. Once you take a little time to lay out what the innovation process is if they have one, if they actually have a formal one, and then how they're actually using it. Because, often times, the formal process that they have is something somebody wrote up three years ago. And everybody's been trying to ignore it as best they can.

So you start by looking at that process and really identifying where in that process is the... Where does the bottleneck reside within that process? And then it's just the basic idea of coaching and consulting. You know, just asking questions to get to the root cause of their problems. What's the thing that's holding them up?

From that, identifying what are the changes that need to be made? To further exploit their bottleneck, to help them further exploit, and then, eventually even, elevate their bottleneck.

Joe: Is there a certain methodology or tool that you've seen used that really works well in innovation?

Mike: Well, there are a lot of different tools that work well. But it really depends on which part of the process you're bottlenecked in. And so let me give you an example. If an organization is struggling to develop good, robust, cost-effective solutions, let's say they

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have no problem finding new opportunities, right? Their struggle, though, is creating good solutions.

Well, then there are a number of tools out there. Anything from basically teaching people in some of the things like De Bono's lateral thinking skills to - if you really want to make it much more, even more, robust - to using TRIZ, which is the theory of inventive problem solving.

And it's the idea of finding the contradiction that underlies whatever problem you're looking at. And that's what inventions are all about. They're about solving contradictions. So if inventing solutions is the problem, those might be the places. Those might be some of the tools that we would use.

If we've have an organization that's pretty inventive, and knows how to do those things pretty well, but were struggling to find good opportunities, then our focus might be on how to train people in the organization. Well, to both change the process in the organization and then train people on how to do customer interviews or market interviews.

How to get both the marketing and technical people out together in a way where they focus on finding those unmet customer needs and quantifying what they are. And that's very different from a sales call. That market interview is a whole skill in and of itself. And it's an important one for people to understand and develop skills in. But, again, that's important if an organization is struggling to find new opportunities.

And then at the complete other end of the spectrum is really the whole marketing side of things. Sometimes you find companies that find good opportunities. They develop good

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products. And then they struggle to market them. They may have literature and sales training. Particularly you see this in industrial business-to-business organizations. You'll see that the sales literature focuses on the features of the product rather than on the benefits of the product.

Rather than on helping the salespeople and the customers that they're serving understand how it's going to affect the customer's Delta T IO&E, it's instead focused on whatever this new widget is. It's made of titanium alloy and operates at 20, 000 Hertz or has this certification or that certification. Those are all features, and they may be necessary features, but customers buy products because of benefits, not because of features.

At that part of the innovation process that commercialization, it's very important that the organization understands how to market the product benefits. Again, I hope that answers your question, but it really depends on which part of the innovation process the organization is struggling with as to which is the best tool.

Joe: Another item that you mentioned in your book that I really enjoyed is the statement about looking to use outside alliances and open innovation. And then, you say before you get too excited and run out to put together that alliance, you should know that nearly 70 percent of alliances fail. I thought wow. I never realized it was such a high percentage.

Mike: It's a big number when companies try to do alliances at the outset. When they to work with external companies outside of what are just typical buy-and-sell relationships, the numbers are dismal when you look at that 70 percent number. But there's a real clear reason for that, a couple of clear reasons. The primary one is that organizations get all

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excited about the idea of working together, and then they don't spend the time to make sure that they have alignment on the objectives for what they're trying to do.

And not just alignment between the people that are negotiating the deal, but it's also important that the deal makers have an alignment inside their own companies. It's really, really important. The other thing is that oftentimes many companies will try to go the outside innovation route when they don't necessarily even have their internal innovation. If they struggle to manage projects, new product development projects within their own company, the solution is not to go to open innovation.

It's like, until you can manage projects well enough inside your own company, trying to do it with a partner; that added complexity of trying to do it with a partner, it's really something you're just not ready to take on. Oftentimes, you'll see companies, almost as: if we can't do it ourselves, then we need to take a partner on.

I really look at open innovation as a tremendous way to elevate your innovation capacity, because what you're saying is that rather than growing our innovation group which grows our fixed costs and all of that, let's take advantage of the skills that are out there.

We all know that's part of the five focusing steps is that it elevates the fourth step, not the first step. Until we're fully exploiting our own innovation capabilities and until we've gone through exploit and probably even more importantly, until we've gone through the subordinate step -

Where we had a product development organization working to the pace of our innovation bottleneck, until that's happening within our own company, trying to do that with a

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partner, I think that's what causes a lot of the open innovation alliance failures that you see out there.

Joe: I think it's a good point, and one of the things I did before is that years ago I went to outsource something I outsourced something that I knew very well. That way I could keep a handle on it, because if I outsourced something that I didn't know well, I'd spend so much time trying to figure out what's going on that I would probably waste the time that I was trying to save

Joe: Is there something you'd like to add or something that I left out in our conversation here?

Mike: Just to try to give your listeners a broad overview. It's really about taking what is a very complex process of product development and boiling it down to finding the part of your process that is limiting, being able to get more through the organization. Let me just mention. We measure that in two ways. One of them is how much new product throughput we see. So, essentially your cash flow from new products and the other being new product cycle time.

How is what we're doing driving the time to get a new product development project from being an idea to being a commercial reality? That's really the focus of the guided innovation system and what is in the book, what we call simplified innovation in the book.

Joe: Could you tell someone how they could get a hold of you and speed up their innovation process?

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Mike: The main website is GuidedInnovation.com, and if they're interested in finding out more about the book, they can go to SimplifyingInnovation.com. There's a link to our blog as well on both. The blog is at SimplifyingInnovation.com, but there's a link to that at the main website, as well. What they'll find there, a number of free resources that they can download as well as -

Once they've familiarized themselves with that, one of the things that we offer is a breakthrough innovation briefing for companies that are struggling with getting more impact out of their product development in less time.

It's a complimentary session where we help them work through what their issues are and identify potentially what sorts of changes might be necessary. There's a little bit of pre-qualification in doing that to make sure that they're somebody that we'd be able to help, but they can also find that on the website.

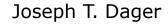
Joe: I would like to thank you very much, Mike. I enjoyed the conversation. I think you've really offered some great insight on both innovation and the Theory of Constraints. The podcast will be available on the iTunes store and also my podcast site. Thank you very much, Mike.

Mike: Thank you Joe, I enjoyed it.

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What others say: In the past 20 years, Joe and I have collaborated on many difficult issues. Joe's ability to combine his expertise with "out of the box" thinking is unsurpassed. He has always delivered quickly, cost effectively and

with ingenuity. A brilliant mind that is always a pleasure to work with." James R.

Joe Dager is President of Business901, a progressive company providing direction in areas **such as Lean Marketing, Product Marketing, Product Launches and Re-Launches. As a Lean** Six Sigma Black Belt, Business901 provides and implements marketing, project and performance planning methodologies in small businesses. The simplicity of a single flexible model will create clarity for your staff and as a result better execution. My goal is to allow you spend your time on the **need versus the plan**.

An example of how we may work: Business901 could start with a consulting style utilizing an individual from your organization or a virtual assistance that is well versed in our principles. We have capabilities to plug virtually any marketing function into your process immediately. As proficiencies develop, Business901 moves into a coach's role supporting the process as needed. The goal of implementing a system is that the processes will become a habit and not an event. Part of your marketing strategy is to learn and implement these tools.