

**Delivering best-fit and next best offers (or actions) Part 3 of our 5 part IBM Good Decision! Webcast Series**  
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Erik Sherman: Good morning, good afternoon or good evening, depending on where you are in the world, and welcome to today's webcast, part three of a five-part webcast series entitled "Five Jobs You Can Do Better With Intelligent Decision Automation." Today's webcast will focus on delivering best-fit and next-best offers and is brought to you by InformationWeek, IBM and broadcast by United Business Media, LLC. I'm Erik Sherman, today's moderator.

We want to make sure this event is as interactive as possible, so I'd like to make a few announcements before we begin.

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And now, on to our presentation, "Five Jobs You Can Do Better With Intelligent Decision Automation Part Three, Delivering Best-Fit and Next-Best Offers." Joining me today is Pierre-Henri Clouin, Head of BPM and Decision Management Strategy, IBM.

Pierre, over to you.

Pierre-Henri Clouin: Thank you, Erik.

In this presentation, we're going to talk about best-fit and next-best action essentially through the lens of a customer story, as well as a high-level review of the underlying technologies that are supporting that solution, namely the WebSphere ILOG business rules management system.

I think this section – I mean, some decisions require to take into account and factor into those decisions multiple requirements that are coming from both across the enterprise and outside factors. And you need to take them all into account so you can make profitable

customer-centric decisions. These factors include, obviously, the actual customer opportunity or market opportunity, but also risk and cost factors, compliance requirements, as well as obviously competition.

And so we see here examples across industries of how those multiple requirements can have a significant impact on customer-centric decisions. If you take the retail space for instance, retailers have to deal with a very volatile environment nowadays where not only competition is significant, margins are razor-thin, and you will see across the board volatility in the price of commodities as well as delivery of goods.

In the financial space, we see many examples of situations that might have already (inaudible) for a financial service that you've applied to only to be denied later on because, for some reason, you were a good potential target but it gives you the risk and the management team decided you were too high-risk for some other reasons.

In the insurance space, for instance, what we're seeing is that you shall not be able to price the risk at the right level and match the competition. In some instances you will have a kind of negative selection of your customer base where the good risks are going to go to competition while the bad risks that you don't necessarily want to take over too much are going to come to you because they got a better deal with you. And that plays across the board, and the trouble in terms of additional space, obviously service availability and yield are key elements that you are trying to take into account. [You take up] space, what we see is a tension between trying to personalize service as much as you can, as well as dealing with the practical reality of what services are available in what geography.

And those are not just decisions around marketing and selling but also the full lifecycle management of the customer, including customer service where customer is coming back for if there is a problem with their service or with their product and you have to figure out what's the next -- what's the best answer to give them.

So today we're going to focus on a customer story that we think exemplifies how you can use business rules management as well as predictive analytics to enhance your interactions with customers and basically deliver best-fit and next-best action.

Here is an example of an established bank, a conglomerate American Bank that had been in business for quite a long time, and they were challenged left and right by new entrants, targeting specific some lines of business like credit cards or savings accounts. And they wanted to use the fact that they were multi-products and full service as a competitive differentiator, but were really having trouble making that happen on the ground. Even though they had branches across their entire markets and they were trying to foster a pretty close relationship with their customers, they really had trouble pushing offers to the point of sale, making sure advisers were on top of the new opportunities and so on.

So what they've done is basically using business rules management and then at a later stage enhancing that position with predictive analytics, they were able to fix their

customer interaction decisions with a holistic approach that takes into account all the multiple computing requirements that goes into making the right decision for that specific customers and provide personalized advice through the various types of interaction they had, especially for the various applications or various types of loans and credits. As a result of that, they were able to grow their (inaudible) with customers by refocusing on growing into multiple types of services, really leveraging the multi-product offering and capabilities.

And so the business outcomes are pretty stellar. I mean, they've been able to accelerate their ability to cross-sell by two-and-a-half times. They've improved the acceptance of cross-sell offers 10 times, and so that's from a very good level to a significant level. And in just 10 weeks, they were able to generate \$15 million of revenue. And over the lifetime of the application, in just nine months, they had paid for the entire system including all the various hardware and software that went into that system.

They are pleased, and the outcomes really come from two things. The first one is being essentially able to do a better job at targeting the right offer. And the revenue comes of course from the fact that once you've identified the right offer, you price them properly and make them so that customers only have to approve them once and don't have to go through any additional processes or steps to get the new product.

So to dig a little deeper into how they've done this, what's realized is that catching business opportunities when customers come to open an account or come to ask for a specific product like say a car loan or a home loan, a mortgage, a home equity loan, these kinds of things, it's the most difficult challenge. And the bank, as I said, was really trying to leverage their customer relationship, but simply dealing with making sure the financial advisers are on top of all the new products, all the new promotions, while operating this process, it took them quite a while to train financial advisers to know the core elements of their offering. And they also have a pretty significant turnover. So, essentially they were able to keep their advisers for just about a year and a half, operating at full steam, and that created a lot of change in just making sure that they were pushing their offers to their customers.

Essentially what they realized is that top advisers are only selling about 15% of their entire portfolio. And so there were a number of reasons for this. Obviously they had multiple systems. They could generate some cross-sell/up-sell offers but it was essentially a very long list of multiple different products that wasn't really targeted. So what happened essentially is that advisers would just go to the things they knew, and as we say, you know, propose something and hope.

If you look to the right of the slide, what you see here is that multiple products can be used for multiple objectives that the bank is trying to accomplish, from acquiring new customers to retaining existing customers, to maximizing the revenue with their customers. And there's a wall of tension between all of these various objectives. Obviously you could maximize revenue by just jacking up credit card rates for instance,

but then you run the risk of losing those customers because they could easily find something else somewhere else.

So, essentially what the bank did is try to factor all these various external objectives that they had and try to model what a good adviser would actually be doing if you had kind of that extensive knowledge across [technical difficulty] and basically could use that to make the right offer, determination, targeting and generation.

So, use the business rules management platform to provide the foundation for this specific cross-sell/up-sell system. And essentially the system generates an offer that's pre-approved across the board, so all the credit risk, checks and compliance checks have been performed. So it's not just singling out a customer might be interested in a credit card, but also making sure that given everything we know about that customer, from its existing relationship as well as potential [selling goods ]like a credit score, if those customers will actually be able and be suitable in terms of risk to receive that offer.

So the system aims at applying those automated offers, it's capturing internal knowhow and best practices. They went across their top advisers, went to their same leading team to help support those requirements determination, and trying really to work through the customer needs as well as working with the compliance teams and the risk teams to really make sure that they have a good way to model all those various objectives that they have to accomplish. And as a result of that, they were able to really provide a much more granular review of the customer existing data, what additional data you would need, and really look in detail about qualifying customers, and so consistency across the board.

So the system started with around [1100] rules and over time it grew to a much larger number and still to this day, very dynamic as customer -- as the various teams are still consolidating the various rules.

So as I said, it's now multichannel and really addresses obviously the branches of the bank, but also their call centers, intranet, as well as some of the brokers that they support, be it for car loans or [book] loans or mortgage. And it really supports the entire decision throughout the various steps of the generation of an offer.

From a more of a systems standpoint, there are multiple product systems that are being used today to manage, particularly mortgage or car loans or those kinds of things, so it's really looking at those various systems to draw in the key data points or the rates for instance and support the decisions. There are internal and external risk assessment systems designed to address certain types of risk determination.

But the business rules platform, let me go back to that, so it's again the foundation here because you can update the rules and push them to deployment in a very short cycle, and the business managers are really in charge of defining those rules and managing them.

And so in practice, if you're trying to understand how that essentially works, what happens, if you want to deliver a best-fit cross-sell/up-sell offer, what you're going to do

first is first look at -- do a 360 on a customer and look at the history of your relationship with him, look at their current assets, look at the household, and obviously ask, if there are questions you think are important to complete your understanding of the customer depending on their initial request.

Then the second step is to look at, given the customer's request, so for instance the customer comes in for a car loan, you're going to try to look at obviously car loans, but also look at their request in a slightly broader term, because the right answer for that customer may not be the car loan but may be a combination of a credit card and a home equity loan. And so model their initial request as a way to be able to look at the broader spectrum of products that are available provided by the bank rather than you restrict their search by the silo of the product.

So once you've done that first pass-through, you're really going to -- and you've identified maybe the few potentially suitable solutions based on the multiple requirements of those various products, you're going to start really figuring out the right solution. So that means looking obviously at the risks that you'd like to take on those kinds of products, the policies to get them approved or not. I mean if you're talking about a credit card for instance, look into things like figuring out the right APR, the right terms and conditions, and if we're looking at a combination of products, I'm still looking at how you combine those products together effectively based on the various requirements such as compliance requirements or risk ratios that you might want to enforce.

So those two steps, we're obviously looking very closely at risks, and one of the objectives here, as I've mentioned before, was really to make sure that if the customer is being -- receives a proposal, we want to make sure the customers actually can just sign on it and get on with it and not has to go through another step of credit approval or something like that. So they really want the credit approval to be part of the actual generation of the offer. And that's actually one of the key factors in making this system very successful.

So once you've narrowed down the scope, you end up with a much shorter list of suitable products or suitable solutions for the customer. And so here, that fourth step, what you're going to do is essentially arbitrate between those various solutions so that you can really bring the -- the offer that you bring to the top is really going to be your best offer. And here there are multiple computing requirements that the bank can have and they can change over time.

So, for instance, at some point, they have requirements where you try to improve the (inaudible) customers and really try to have the customers carry as many products as they could from the bank. And so if, for instance, you will have two answers, one being just one car loan and another one being a home equity loan combined with a credit card, they would have preferred to push the combination of the home equity loan and the credit card as opposed to just the car loan so that they can really increase those multiple touch points with the customer.

So that's basically the step where you're doing those kinds of determination and ranking and privatization and trying to come to two or three offers knowing that the top offer is most often the one that's eventually going to be chosen. And as we discussed anticipated results -- it's a multichannel system so it works across branches and online as well as call centers and even some brokers.

All right, so let's go real quick over the business rules capability here. So that's really the underlying technology to really make the decision information successful, and so the business rules management system is essentially composed of three parts. There's the deployable component that can actually roll out to your various customer processing systems; there's a repository that's the single source of truth for all the various rules that you want to push out; and then there's eventual user tooling that you can use to be able to make your decisions.

And the real value here is that you get your results and the time needed to push those business rules to your deployed system. And so providing the opportunity in updating rules, managing productivity, updating promotions on a very regular basis. And so the benefits of agility, empowering business users, providing a lot of precision on how you explain your logic because you can over time update it and improve it, you're really providing a successful platform here.

One key capability that we've been using and that customers are using in those kinds of scenarios is the change in (inaudible) approach. I mean we have a whole bunch of tools for testing and simulation and comparing such and rules versus others, so creating new rules and running existing data through them so you can see the impact. But the change in (inaudible) approach really helps you basically compare two rule sets, one against the other, and really figuring out what's the upside of one versus the other. And some customers actually go even beyond and actually deploy their business rules platform in change in (inaudible) direct kind of way.

So once they had implemented the business rules platform and gotten all those benefits from being able to automate decision in a very granular fashion and a very (inaudible) fashion that it takes on a regular basis, they are also able to take advantage of the fact that the business rules platform was now generating normalized data about how successful their offers were being.

And so, something that we've seen, quite a few customers come to us with a situation where they have some interesting data warehouse, they have a lot of data about customers but not necessarily the type of data they see [objectionable] for what they want to do. And so here they have basically an approach that can start with existing knowhow and best practices and over time, as you're run your system, you get normalized data about execution and how successful your various offers are, how successful you are mitigating risks. And so, using that execution data is a great input for (inaudible) because now you can run statistics in multiple different ways to really try to improve the quality of your decisions. And that means customer profiles and product features and those kinds of things. So that's a key success factor as well.

Now as they've gotten the first upside from using business rules, now the second. Implementing improvement is really coming from adding the predictive analytics capabilities on top of that. And so just to kind of compare and contrast business rules and create a model, the combination of both really provides a powerful coverage because you can combine things that you know for certain and things that you probability and those kinds of things, really comparing the things you know for certain and things you don't know, and really unveil some intrinsic knowledge from the data that you're capturing.

And so predictive modeling I mean obviously was used from the start for some of the risk assessment they were performing including credit risk and stuff like that. But how you actually improve the offers, how you actually improve the thresholds, for instance, for your various risk ratios, those kinds of things, I mean, were actually derived from the initial implementation using business rules.

So today what we're saying is that people are using basically business rules and predictive analytics both at the same time to really improve business rules either because they already have data or because they want to improve the data, their business rules based on their past application of the business rules platform.

It's obviously used at one time for what people call blended decisioning where you're going to combine scoring from the predictive systems with what you call descriptive scoring which is essentially based on your internal knowhow and best practices.

And so the bank was really initially using -- doing some kind of blended decisioning and they were executing goals to other risk systems that they have prior to the implementation of this solution. But over time they were able to actually improve the quality of the rules using the, what we said, essentially using predictive analytics to mine the existing data.

So acknowledging that WebSphere has tried really hard to improve the integration with predictive analytics and we've come out in December with support packages, essentially a way for us to release new features into our base offering in between release cycles. And so we've come up with a way to do these things, you know, import PML object procurement is the predictive modeling market language. It's a standard way of representing predictive models, and so you can import from multiple platforms that support it and most of the (inaudible) platform including SGSS today are supporting PML. And so you can import decision trees from those data mining platforms into business rules, you can actually run them or modify them as much as you want. And then we've improved our ability to in runtime invoke SGSS, so you can really do those blended decisions much more effectively.

All right. So I guess that concludes the overview of best-fit and next-best actions. So as you can see, with the business rules of course, you can really maximize your opportunity here because you have a platform that really enables you to bring all the various requirements that come across the enterprise and beyond to really make the right decision.

So, most of the activity we're seeing today is really around pricing and promotion and revenue management, cross-sell/up-sell was the example today, offers obviously. That goes across not just marketing or sales offers but also customers and services offer. And so this whole platform really enables you to capture the customer opportunity, capture risk and cost, and here you can obviously use some external tools, some specific risk scoring systems.

It's the perfect platform for compliance requirements because you can express the compliance rules in natural language or in a way that business users can actually understand them. And some industry nowadays, especially in financial services, have to deal with an increasing number of those requirements. And obviously, provides a lot of flexibility and agility so you can respond to competition effectively.

So in closing, what we're seeing with best-fit and next-best action is that really some decisions across the enterprise can really benefit very strongly from that approach where you combine business rules and you can expand it over time with predictive analytics.

But most decisions actually, can actually leverage this approach. And that's what you call decision management. And that provides a way to really improve agility and responsiveness, align the enterprise and advance customer's (inaudible). And so that comes very much together for the inspection, but a lot of other decisions, operational decisions we've identified actually benefit from that approach. So once you've done it for those kinds of decisions, that's definitely an approach you can reuse someplace else.

So just in closing, what to do to next to get started with Decision Management, and obviously the first one is Impact 2011, is actually taking place in a couple of weeks. So we really encourage you guys to attend. There will be a number of sessions there about Decision Management. We also have resources on our web page, [ibm.com/decisionmanagement](http://ibm.com/decisionmanagement). And another thing we can do on a one-to-one basis is schedule process improvement and discovery workshops that provides a way to get through your requirements and really help you map out the benefits that you can leverage from using that approach in your systems.

So with that, I think we're going to go to a few questions.

Erik Sherman: Thank you, Pierre, for the presentation. Yes, before we begin with today's Q&A session now, please fill out the feedback form that is opened on your computer. To complete the form, please press the Submit Answer button at the bottom of the page. Thank you in advance for filling out the feedback form. Your participation in this survey helps us improve future webcasts.

And now on to the Q&A session, question-and-answer portion, of our event.

As a reminder, to participate in the Q&A, please type your question into the text box located below the media player, and then click the Submit Question button.



And for our first question, Pierre, how do you leverage blended decisioning effectively for these kinds of solutions?

Pierre-Henri Clouin: Thank you. So I think what we've shown here is when we talk about blended decisioning, is really this combination of using business rules and using predictive analytics. And I think our approach at IBM is essentially to really provide a clear separation between the two. We believe it provides a much more effective way to address the various needs of the customers, as well as from an architectural standpoint, really use some of the capabilities you might already have from a risk standpoint, for instance, or from a -- if you're using data mining for CRM purposes like data mining, customer's propensity to buy, or to doing market best (inaudible) analysis, those kinds of things.

So we believe that separation for which you have on one hand business rules being a very explicit platform for some of your decision criteria and predictive analytics and especially SGSS provides today a scoring engine that you can deploy at one time very effectively and combine the two, business rules engine and scoring engine together, provides a very scalable and proficient approach to combine those insights into a decision and render a decision.

What we see our customers typically do is, for instance, when they do scoring, predictive scoring on one hand, and then descriptive scoring based on business rules, and then use the business rules to kind of provide the prioritization between the two. And so that's a very transparent way for customers to actually manage where they want to put the emphasis, where they want to put the priorities, and over time people feel more comfortable with that approach.

Erik Sherman: And we're running a little short on time, so one more question. How do you get started with this type of solution?

Pierre-Henri Clouin: I guess we've touched on this briefly. The business rules approach will really provide a nice way to get started if you don't necessarily have the history or if you want -- if for some systems reason it seems better with the next level solution. If you have a lot of data already available, it can obviously leverage the data mining you can do on this data and leverage that predictive insight that you can gather from the data.

So many customers don't necessarily have in the data warehouse the kind of data they need to make it very actionable, for their execution, and so the business rules platform provides a simple way to harness the internal knowhow and the best practices from your organization, deploy that, and then see how it works, in a consistent fashion across the board, and start improving on it over time.

Erik Sherman: Pierre, thank you very much for the presentation. And thank you all for delivering -- for attending today's webcast "Five Jobs That You Can Do Better With Intelligent Decision Automation Part Three, Delivering Best-Fit and Next-Best Offers" brought to you by InformationWeek and IBM.

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On behalf of our guest, Pierre-Henri Clouin, I am Erik Sherman, thanks for your time, and have a great day.