Guidelines for the incoming modeller

_ by Matthew Somerset DePoint

The incoming modeller to a business devoid of internal analytics should have a full account and understanding of the risks and rewards associated with bringing analytical talent in-house. Matthew Somerset DePoint, senior modelling analyst for US-based retailer and financial services company Target Corporation, lays down guidelines for the creation of internal modelling teams.

Faced with a need to chalk up quick successes, modelling teams may choose to build a tree-based model

Modelling and analytics have proven widely successful in reducing risk, increasing response and targeting profitable segments across a multitude of portfolios and industries. With this success as a banner, more and more companies have started to bring talent in-house, relying less on external vendors to complete mission critical projects. Internal modelling resources provide distinct advantages over external vendors and consultants, but there are risks involved.

Common questions and concerns include:

- Do the modellers have a "sponsor" within the senior management?
- Do the modellers know their internal clients?
- What solutions should be built internally and what should be left to external vendors?
- What IT system resources are available in-house?
- How much time should be spent on actual modelling versus client relations and process development?

A senior management "sponsor"

Seemingly an obvious requirement for bringing analytics in-house, the skill set and responsibility of the management sponsor can dictate the scope and importance of the modelling effort. Did senior management recruit a vice president of decision sciences in order to start a classic modelling shop? Did the manager of late stage collections hire two modellers in order to optimise the sale of the portfolio to outside collection agencies? Both scenarios can be exciting and intellectually fulfilling, but the required resources and company buy-in to analytics are remarkably different.

More often than not, modelling and analytics enters a company via a specific area like marketing, account acquisition, collections or guest services. In these cases, the modeller must spend more time on building consensus and proof-of-concepts in order to get buy-in from the organisation to use analytical methods across the board.

Even in a situation with a clearly identified senior management mandate, the modellers must take care not to alienate internal clients with overly mathematical and complex presentations and solutions. They must also take care to avoid becoming too focused on personal research projects and "neat" ideas that are not tied directly to the immediate business needs. A little cross-department goodwill and partnership can go a long way in any organisation.

Know the internal clients

The internal modelling team must identify a senior management sponsor who can support the idea of analytics. However, on a day-to-day basis, the internal modelling team must get to know existing clients and foster relationships with new ones. The metrics of model and personal success depends on the objectives of the client who initiates the project. If the modelling team has not developed a relationship and a process that identifies and defines success criteria, neither the modelling team nor the client will be satisfied with the end product.

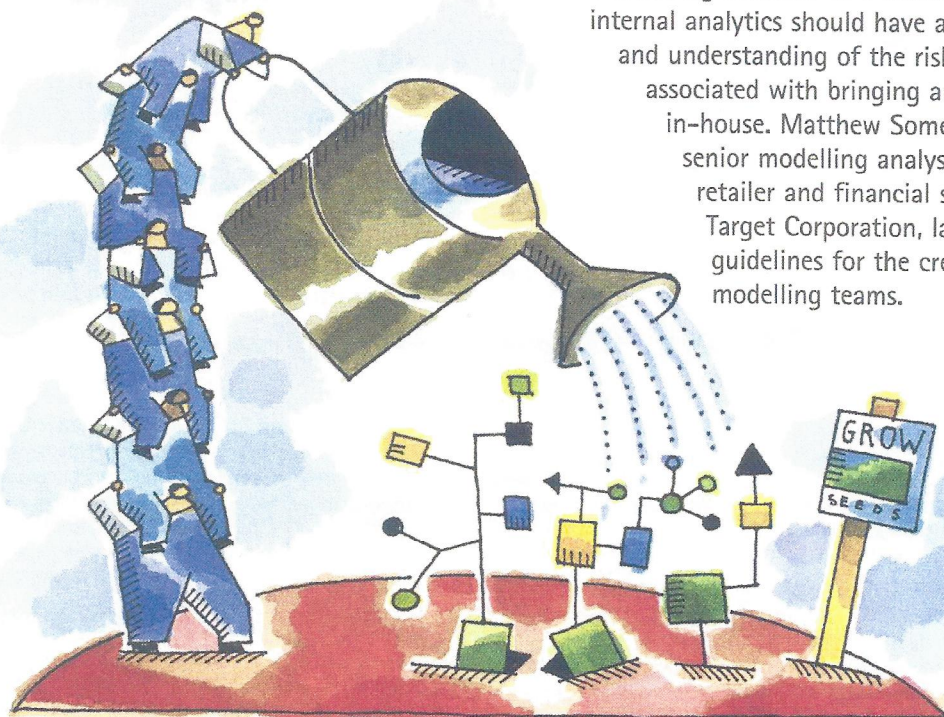In addition, an incoming modelling team might only have a clear client for the first few assigned projects, the projects presented as

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the reason for bringing modelling in-house. After the initial honeymoon period, the modellers might be expected to continue to find work by fostering relationships with other groups. Potential clients must be somewhat familiar with modelling in order to ask the right question of the modellers, so that modellers are not always pushing ideas and solutions on clients. Such a situation could easily cause internal strife because clients feel as if they are losing control over their processes. Clients must be shown that new modelling tools empower them to focus on their area of expertise while the modellers focus on the building of those tools.

In a situation where the internal client list and the modelling mandate is clear, the modeller must still understand the limit and intention of the mandate. Is the modelling team supposed to only produce scores, or also assist in strategies based upon those scores? Is the modelling team expected to help expand modelling beyond the bounds of the current mandate, or only focus on increasing the technical rigour within the mandate? Is the internal client familiar with using models from external vendors, or are models and model-based strategies a new concept? Knowing the client's knowledge base and the scope of the modelling mandate will help to limit power struggles, bruised egos and, most importantly, wasted resources.

Internal versus external solutions
To spend resources on in-house analytics presupposes some models and strategies are going to be built in-house. The in-house team should know their own data better, know their own clients better and understand their own business problems better than external vendors. They should have a faster turnaround time on projects and should be able to react quicker to changes in the marketplace. However, an internal team cannot do everything better and faster than external vendors.

Some external vendors have distinct advantages over an internal team. The vendor may have more industry-specific or modelling experience than the internal team. The vendor may know the data better, especially if they are supplying it, and may have access to industrywide data. They might know the implementation system better. The organisation may want to maintain a long-term relationship with the vendor by contracting a certain percentage of jobs to that vendor. Lastly, the external vendor might be able to provide better documentation and a solid reputation that may better serve to meet regulatory compliance.

For example, the modelling team at a credit bureau, with access to industrywide data, is probably more capable of producing a generic delinquency risk score than a newly formed in-house modelling team. The in-house team's comparative advantage is in building a custom-risk score to support business-specific decisions. In the end, the modellers must put pride and ego aside to strategically choose projects that will make the most sense for the company and for the modelling team.

IT and software resources
An often-overlooked area by the incoming modeller is technical resource availability. What OS platform will models be built and implemented on? What type of data systems will house the customer information and to what level of granularity is data available? Does the modelling team have direct IT technical support or does the support team reside at the end of a help desk phone call? Will models be scored manually or within an automated scoring system? Can the implementation platform handle mathematical equations or only scorecard logic?

The answer to these and other questions dictate the complexity and type of models that can be built. Knowing the model limitations before project commencement can reduce wasted time, energy and frustration. For example, many origination systems can only handle scorecard logic rather than mathematical equation-based models. Preparing scorecard logic creates unique challenges to the modeller. Common modelling techniques like logit and OLS are theoretically available but usage and implementation of those techniques are often limited by the scorecard implementation system.

For example, more often than not, available variables are hard-coded within the system, requiring a significant infrastructure modification over which the modeller does not have complete control. This in itself is not necessarily inefficient. The organisation needs a complex implementation infrastructure to support monthly or daily automated account scoring. Contrast this, however, with building a model to create a marketing mailing list. The modeller can complete this ad-hoc and manual project quickly and usually at her desktop without having to go through some complex implementation system. The modeller has much more control over the choice of modelling techniques, variable selection and transformation and model implementation.

Technology limitations might also dictate the priority of projects. Faced with a need to have quick successes, the modeller may choose to build a tree-based model that per-

forms fairly well and can be implemented in two weeks, versus the mathematical equation-based score that will take six months to implement because of IT constraints. In the end, the successful modeller must learn about the technology systems quickly and – preferably - before any model is built. Remember, a good model today is often better than a great model tomorrow.

Time spent on model building
Uncharted modelling territory is both exciting and perilous. Often, the modeller is asked to improve upon a manual decision making process based only on business knowledge. When a modeller is asked to produce a challenger to such a champion, the appropriate concern is not what modelling technique to use, but how to obtain client buy-in. Almost any model when coupled with business knowledge will prove superior. Less time should be spent on modelling and more on client relations and process documentation. Such investment will reap rewards in the future because the client will have a better understanding of the modelling process, will be able to ask better, more informed questions and provide appropriate business knowledge. An informed client is crucial to producing a better model and establishing a mature modelling process.

In a remodelling or a strategy-revamping situation, the time spent on modelling is more important. The modeller does not need to sell the art of modelling, but the skill of the modeller and the choice of technique. In this situation, extra time spent on the technical aspects of model building is worthwhile.

Many speed bumps accompany the excitement of a newly formed in-house modelling group. To be successful, the new modeller must quickly identify the senior management sponsor and establish concrete metrics of success. The modeller must have a good understanding of the client in order to produce results directly applicable to business needs. Humility must go hand in hand with energy as the modeller tackles projects once handled by an external vendor. Last, the time spent on modelling might seem inadequate at first, but technological and organisational limitations might dictate the type and complexity of models built. With some initial investment, the incoming modeller will enjoy the challenges of the situation while directly contributing to the bottom line of the company. ⓒⓡⓘ

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